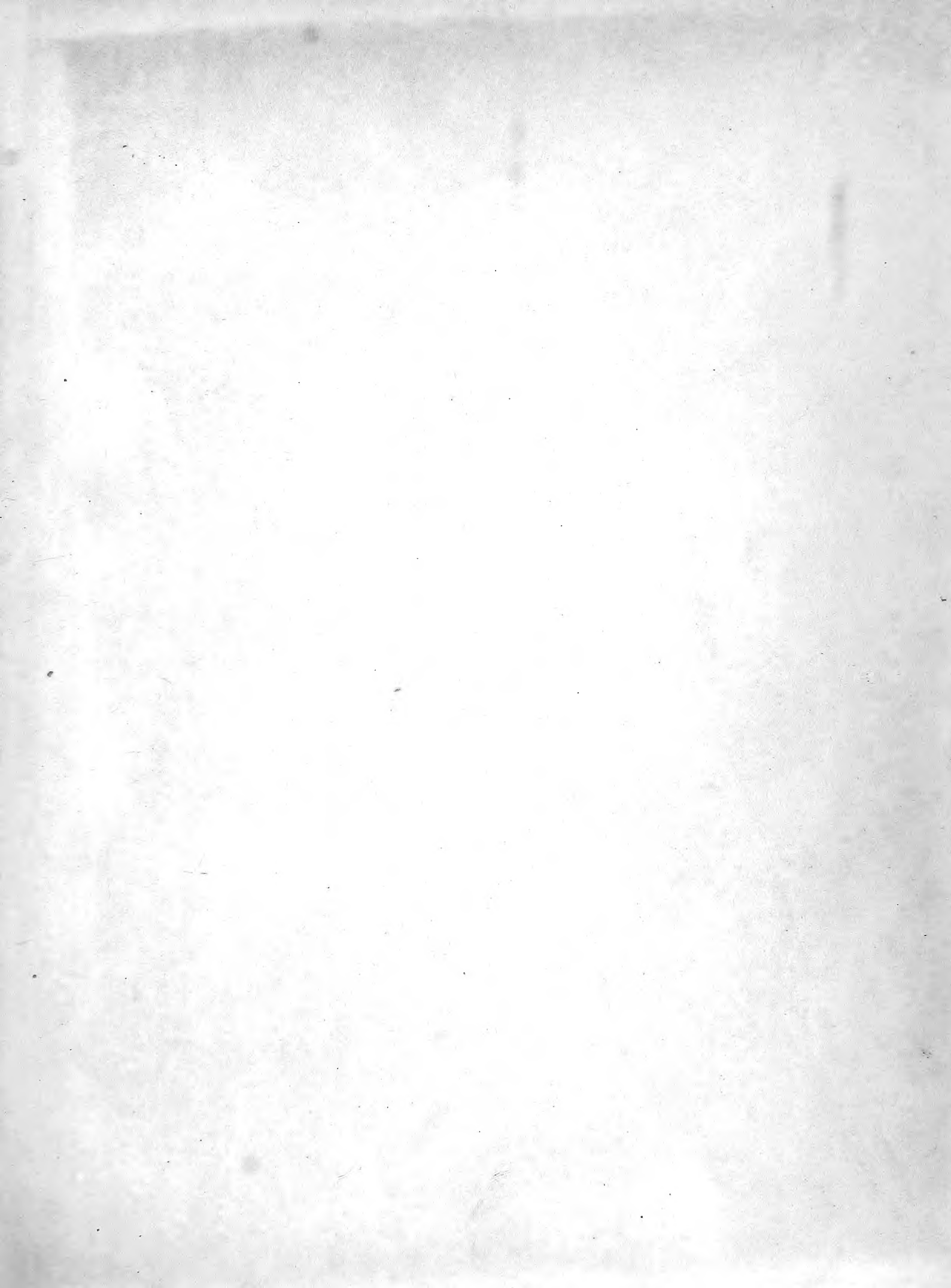
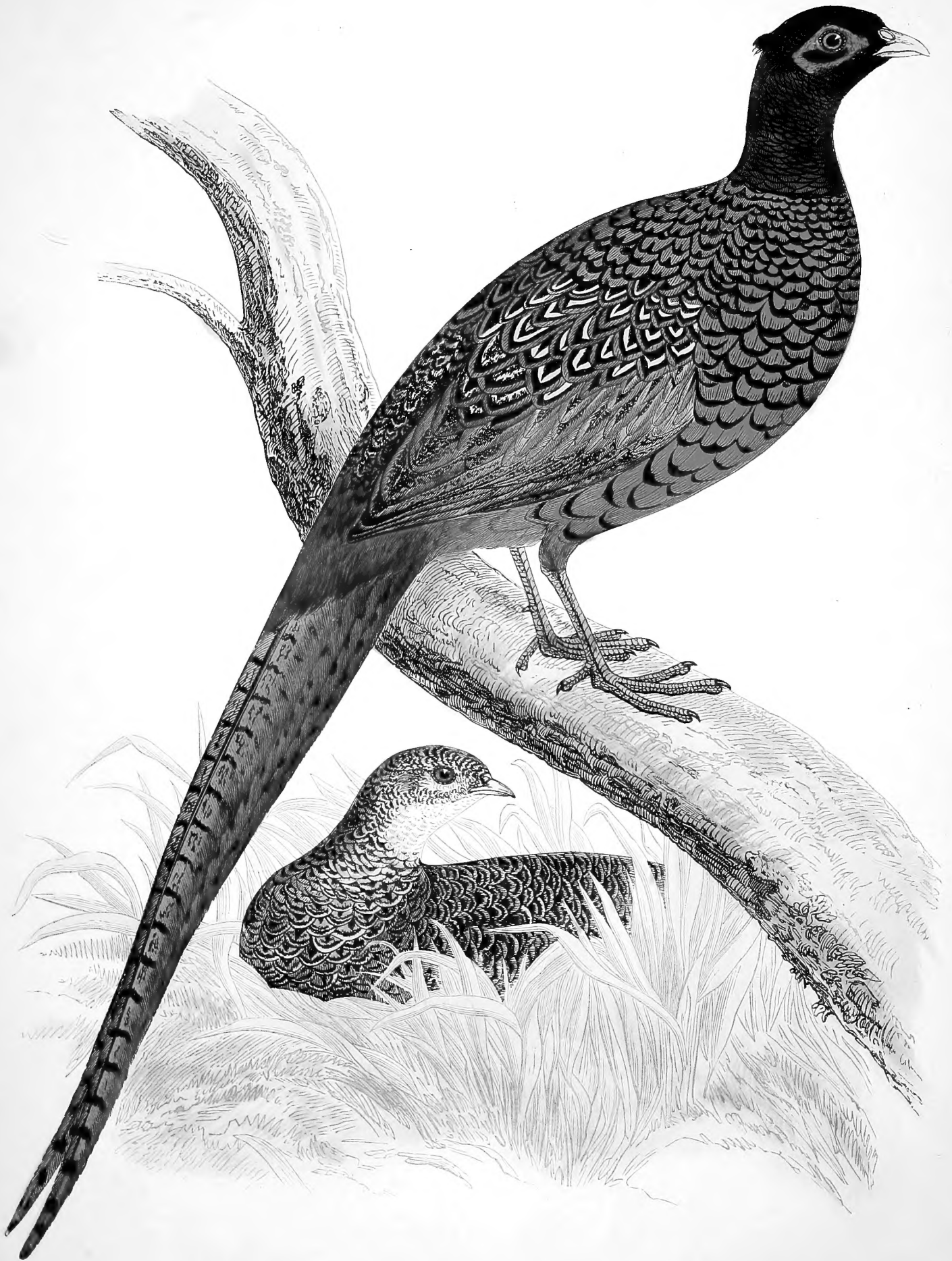


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PHEASANT.

BRITISH
GAME BIRDS
AND
WILDFOWL.

BY
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MEMB: WERN: CLUB.

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BRITISH

GAME BIRDS AND WILDFOWL.

PHEASANT.

<i>Phasianus Colchicus,</i>	LINNÆUS.
<i>Faisan vulgaire,</i>	TEMMINCK.

Phasianus—Belonging to *Phasis*.

Colchicus—Belonging to *Colchis*.

WHETHER we look upon this very fine bird as an ornament to our parks and woods, or in the more gross and epicurean light of an additional luxury for our tables, we cannot but consider the time of its introduction into this country, some five hundred and fifty years ago,* as a very important epoch in the annals of the sportsman. Its hardy nature, the readiness with which it breeds, and its rapid increase under favourable circumstances, have led to its introduction into all our preserves; while its comparative familiarity and tameness, combined with its large size and peculiar habits, have made it a very favourite object of pursuit to the poacher, or unlawful sportsman.

The original 'locus a quo' of the Pheasant is generally believed to have been the banks of the River Phasis, now called Rion, which ran through the ancient Colchis, in Asia Minor. We thus find the origin of both the generic and specific names accounted for; and although such an application of the names of places to designate this bird, would reasonably lead to the supposition that it had only, or at any rate chiefly, been originally an inhabitant of that particular district; yet such an idea is hardly reconcileable with its known hardiness, and the readiness with which it multiplies. It probably was then, as it is at the present day, to be found more or less generally distributed across the whole of the Asiatic continent. But, however interesting it might be to pursue the

* A. D. 1299.

subject of its general distribution over Europe and Asia, we must now confine ourselves to its consideration as a naturalized inhabitant of Great Britain and Ireland.

The natural habits of the Pheasant leading it, as they do, to frequent woods and copses, where some of its food is procured, and shelter obtained, there is now scarcely a district in these countries, where such shelter and moderate protection are afforded to it, where it is not to be found more or less abundantly. In Scotland, they are to be seen in greater or less numbers as far north as Sutherlandshire; and in Ireland, although not so generally distributed as in England, they are by no means uncommon, having dispersed themselves widely in the neighbourhood of the preserves into which they had been introduced. But, although the Pheasant is thus widely distributed, and increases so rapidly, there can be little doubt that its present existence in this country, in a comparatively wild state, is to be attributed to the care and attention bestowed by our noblemen and country gentlemen upon its preservation, rather than upon the habits of the bird in avoiding or eluding danger or destruction. So large a bird, and one in such general esteem, both for the beauty of its plumage and its excellence as an addition to the luxuries of the table, is, as may naturally be expected, eagerly sought after, both by those who desire it as an ornament to their collections, and also by those who supply the larders of the wealthy and luxurious.

Although the present custom of country gentlemen supplying the regular dealers with ample quantities of game from their preserves, must greatly tend to diminish the profits of the poacher, and also the number of poachers; still the high price which is paid by the dealers leaves a wide margin from which the illegal sportsman may and does reap a very abundant harvest. We once knew a veteran and most determined poacher, who made no secret of his nefarious proceedings, and who, we believe, was never convicted of poaching, and yet he lived entirely on the profits of this, his regular business, and never, that any one knew, applied himself to anything else. He was well known, and consequently often watched, and yet always contrived to baffle his watchers in one way or another. Some time before the 12th. of August, he would start off to the moors, and, no doubt, did not return before reaping a good harvest. He used to insinuate that much of his profits on these occasions was derived from unsuccessful, would-be sportsmen, of whom there is always a goodly number on some of our moors. After deriving all the profit he could from the moors, he returned south for the Partridge and Pheasant season.

We are convinced that this kind of system could not be carried on unless sanctioned by the dealers in game, and the proof that it is so is given by the fact of both birds and hares, purchased in the market, frequently showing evident signs of strangulation, and not of having been killed in the usual and legitimate way. We by no means deny that some of the profits of the habitual and professional poacher are derived from a class of people who are willing to break, and sanction the breaking of, any law, if they can only

obtain their object in a cheaper way than through the legal and recognised channels: such people we have heard boast that they could always procure game at little more than half the market price. From whom could they buy it, unless from the poacher or his associates? Such conduct cannot be too strongly reprobated. Little do these people think that the convicted felon, who expiates his offence in prison or in exile, may perhaps have been led on, and on, in his career of crime by their guilty and unprincipled selfishness.

We will now consider the natural habits of the Pheasant, and will show that these are of such a kind as to make it, as before remarked, an easy prey to the illegal sportsman.

The most favourite resort of the Pheasant is the thick, brushy underwood, composed of small shrubs, bramble bushes, long coarse grass, and other wild plants, which is often met with through the whole of small woods and coppices, and in the outskirts of larger woods, or where woods have been cut down, and the brushwood allowed to grow as it would. In such situations as the above the Pheasant remains quiet and concealed during the day-time, but at sunset and sunrise it leaves this seclusion for the more open feeding-ground; it is singular that on these occasions it never walks, but, we believe, invariably runs from the cover to the place where it is accustomed to feed. Its habitually frequenting the same cover and feeding-ground, leads to the formation of narrow runs or paths, which, to the practised eye, tell with certainty the number and kind of game to be expected. It is mentioned in Thompson's "Natural History of Ireland," that in that country Pheasants are frequently found during the summer and autumn months in the potato fields. We never remember to have noticed the Pheasant in such a locality in England, but the extensive culture of the potato in Ireland, very often to the partial exclusion of wheat, may account for this adaptation of its habits to the necessity of the case.

During the autumn, winter, and early spring months the Pheasant perches in trees when at roost, but from the beginning of April till the middle or end of September its roosting-place is among the long and coarse grass and sedge of its favourite cover. On withdrawing from the trees as roosting-places in the spring, the Hen bird is the first to set the example; but the Cock Pheasant does not abandon his tree for several weeks later. When, however, they have taken to the ground, they do not again use the trees at night, unless something has occurred to disturb them. During the winter single individuals will frequently leave the coverts; and, if not molested, will remain for a considerable time at a distance from their natural haunts, and during this period, they usually roost in hedges, or thick grass or stubble, seldom resorting to trees as roosting-places. These stragglers are the exceptions; as a common rule, Pheasants will be found in winter roosting in trees, and generally somewhat in company—where one is found, others may be expected at no great distance. The tree preferred by the Pheasant for its nocturnal resting-place, is the larch fir when attainable; and this probably arises from the peculiar growth of this tree—the branches being nearly at right-angles to the trunk. Their preference for

these trees, which are denuded of their leaves in the winter, gives additional facilities to the poacher for their destruction, as so large a bird is very readily seen on the almost naked branches, and offers an easy mark to his gun.

When undisturbed, this bird will not unfrequently associate with the barn-door fowl around the farm-yard; and we have known many instances of their roosting among trees within a very short distance of the house; but in such cases a gun was never discharged anywhere near their haunts. Still, although the Pheasant courts our protection, and will readily become tolerably familiar, it cannot be brought into a completely domestic state. On this point, the opinion of, perhaps our first field naturalist, Charles Waterton, will be considered decisive; for his known ingenuity and perseverance were doubtless taxed to their utmost before he penned the following:—"Notwithstanding the proximity of the Pheasant to the nature of the barn-door fowl, still it has that within it which baffles every attempt on our part to render its domestication complete. What I allude to is, a most singular innate timidity, which never fails to show itself on the sudden and abrupt appearance of an object: I spent some months in trying to overcome this timorous propensity in the Pheasant, but I failed completely in the attempt. The young birds which had been hatched under a domestic hen soon became very tame, and would even receive food from the hand, when it was offered cautiously to them; they would fly up to the window, and would feed in company with the common poultry; but, if anybody approached them unawares, off they went to the nearest cover, with surprising velocity; they remained in it till all was quiet, and then returned with their usual confidence. Two of them lost their lives in the water, by the unexpected appearance of a pointer; while the barn-door fowls seemed scarcely to notice the presence of the intruder. The rest took finally to the woods at the commencement of the breeding-season. This particular kind of timidity, which does not appear in our domestic fowls, seems to me to oppose the only, though at the same time an insurmountable, bar to our final triumph over the Pheasant. After attentive observation, I can perceive nothing else in the habits of the bird, to serve as a clue by which we may be enabled to trace the cause of failure in the many attempts which have been made to invite it to breed in our yards, and retire to rest with the barn-door fowl and turkey."

These remarks were written just twenty years ago, and each year has only confirmed their truth. We have never known any one succeed to the extent Mr. Waterton did, at Walton, though it is not uncommon for those that have been brought up by the domestic hen to come regularly to be fed when called; but their numbers will gradually diminish either by desertion or destruction, till, as Mr. Waterton says, those that are left take to the woods at the beginning of the breeding-season.

The crowing of the Pheasant is continued the whole year at the time of roosting; it is frequently heard through the night, and again at sunrise; and during the hours of

daylight it will often crow on the occurrence of any sudden disturbance or noise, such as a gunshot or peal of thunder.

The possession of habits such as we have detailed, cannot fail to render the Pheasant an easy prey to the poacher; and as, in order to be able to cope with him, we must be aware of the stratagems to which he resorts, we will now describe the various modes in which this bird is feloniously abstracted from its native preserves. The most usual and deadly method of destruction is undoubtedly by the fowling-piece; and various are the changes and alterations which this weapon undergoes to enable the poacher to carry it without detection to the scene of his labours. We have now before our mind's eye a particularly curious instrument of this kind, which was taken along with its owner, on the manor of a friend of ours, where it had just killed a fine Cock Pheasant; it and he were taken indeed 'flagrante delicto.' The gun consisted of a stock of the smallest and rudest home manufacture, quite capable of concealment in the coat pocket; a large old-fashioned flint musket lock was roughly attached to it, and it was fitted with a small short barrel, composed of a piece of thin iron tubing, about six inches long, soldered on to the barrel of an ancient horse pistol, making altogether a tube of some seventeen or eighteen inches in length. To all appearance it would have been much more likely to carry death, or injury to its owner, than to anything at which it was aimed, and yet it was used effectively, certainly on one occasion. We have seen other poaching guns, but never another at all comparable to this one for rudeness and apparent danger. As is usual in all deeds of darkness, the time chosen by the poacher for shooting the Pheasant is after it has retired to roost for the night; it is not often that the Pheasant-poacher goes out alone, for he is well aware that on the first sound of his gun he will have the keepers upon him, and in that case he must beat a retreat, or be taken; his more usual plan is to join with a number of other similarly-intentioned people with himself, and then take the covers by storm; and if the keepers venture to come in contact with them, a general fight ensues, which too often ends in bloodshed. We believe, indeed, that the mere fact of these men being out on an illegal expedition, without any actual intention to inflict personal injury, leads them to the frequent commission of the most serious of crimes.

We well remember, some years ago, conversing with a man, who was under sentence of death for shooting a keeper, but who was afterwards transported; some mitigating circumstances having transpired. On asking him what induced him to commit such a crime, as shooting the unfortunate keeper in the deliberate way that it appeared in evidence he did; he said, that he really could not tell how it was; he and his companions were suddenly attacked by the keepers; that he had no intention of killing or injuring any one, but that it all occurred in a moment; nor could he give any other account, though apparently quite willing to afford us every information.

Another very destructive method of poaching, and which is always carried on by a

single person, is the setting silk or wire snares in the runs of the Pheasants, of which we have spoken before. These are set quietly during the day, and are, we believe, generally allowed to remain till the feeding-time of the birds, when, on running with their heads stretched forwards, as is their custom, they are caught in the snickles or nooses, and the poacher, watching his opportunity, quietly removes his snares, and his victims. Sometimes, however, having set his snares, he immediately proceeds to drive the Pheasants in the cover by the aid of a silent cur dog; on such occasions the destruction is very great. Having thus driven the birds into his snares, he at once collects the plunder, and hides it to be removed at night-fall.

Pheasants are also said to be sometimes caused to fall into the poacher's hands, by being fumigated to stupefaction or suffocation while on their perches asleep. Mr. Waterton, a high authority on these subjects, considers this an idle story, and says that though he has repeatedly tried the plan, he never could succeed in bringing one bird down from its roost. On the other hand, the late Mr. W. Thompson, of Belfast, a most careful and excellent naturalist, says, in his "Natural History of Ireland," that he has no doubt of the fact, and that, though he has never seen it done, full particulars of the method pursued have been communicated to him; but he very properly does not mention them. Sulphur, he says, is the agent used. We can readily conceive a more easy and efficient agent than sulphur, but should be very sorry, in any way, to aid in the spread of a knowledge that might be turned to so bad an account.

Having now given a slight outline of the usual stratagems had recourse to by poachers in the pursuit of the Pheasant, we are led naturally to consider the best methods by which we may baffle them, and secure for our own use the birds we have been at so much trouble and expense in preserving. It is clear, from what has been mentioned of the determined way in which the poachers of Pheasants proceed, that something more is necessary than opposing them merely with the brute force of a large staff of keepers and watchers. We should endeavour to turn to our own advantage the natural habits of the bird, but which, under ordinary circumstances, render it an easy prey to the poacher. No one has written more to the purpose on this point, or with more accurate knowledge of the habits of the bird, than Charles Waterton, and we cannot, therefore, do better than give, in his own words, his admirable hints on the best method of securing our game from the arts of the poacher:—

"In order to render useless all attempts of the nocturnal poacher to destroy the Pheasants, it is absolutely necessary that a place of security should be formed. I know of no position more appropriate than a piece of level ground, at the bottom of a hill, bordered by a gentle stream. About three acres of this, sowed with whins, and surrounded by a holly fence, to keep the cattle out, would be the very thing. In the centre of it, for the space of one acre, there ought to be planted spruce fir trees, about fourteen feet asunder. Next

to the larch, this species of tree is generally preferred by the Pheasants for their roosting-place; and it is quite impossible that the poachers can shoot them in these trees. Moreover, Magpies and Jays will always resort to them at night-fall; and they never fail to give the alarm, on the first appearance of an enemy. Many a time has the Magpie been of essential service to me, in a night excursion after poachers. If there be no park wall, an eye ought to be kept, from time to time, on the neighbouring hedges. Poachers are apt to set horse-hair snares in them; and these villanous nooses give the Pheasants apoplexy. Six or seven dozen of wooden Pheasants, nailed on the branches of trees in the surrounding woods, cause unutterable vexation and loss of ammunition to these amateurs of nocturnal plunder. Small clumps of hollies, and yew trees with holly hedges round them, are of infinite service, when planted at intervals of one hundred and fifty yards. To these the Pheasants fly on the sudden approach of danger, during the day, and skulk there till the alarm is over." "If to these arrangements for protecting Pheasants, there could be added a park wall, from nine to ten feet high, and inclosing about two hundred and fifty acres, consisting of wood, meadow, pasture, and arable land, the naturalist might put all enemies at defiance, and revel in the enchanting scene afforded by the different evolutions of single pairs, and congregated groups of animated nature."

We are convinced that if the principles laid down in these remarks were generally considered and acted upon by our large landed proprietors, the poacher would have but a sorry chance of ever securing more than a stray bird, which would never be missed; and we cannot but think also that by thus calling in the aid of Nature, we should very materially diminish the present enormous expense which attends the preservation of the Pheasant; for it is quite certain that were the birds afforded such well-devised shelter as is above recommended, half the present number of keepers would suffice. The expense of preserving game must necessarily vary considerably from a variety of local causes, and it would be difficult, probably, to average it; but we have heard a large landed proprietor assert that every head of game, including in the list Pheasants, Partridges, and Hares, cost him at least ten shillings. This probably was rather an extreme, but certainly not an exceptional case; for we have heard the same amount estimated in other widely distant localities. If, in addition to well-fortified preserves, the owners were to add the supplying dealers in game with Pheasants at a much less price than is at present paid for them, it can hardly be doubted that they would entirely exclude the poachers from the market, and few would be found to run the risk of poaching Pheasants for their own eating. Against this it may be argued that it is hardly to be expected that they should sell Pheasants at a greater loss than they do at present. We do not believe the loss would be greater, if so great; for, if our premises are correct, the expenses of preserving would be so greatly diminished, and the quantity of game so much larger, that it is not impossible what is now a dead loss might become a positive gain.

It is well known that birds which have been snared will keep longer than those which have been shot, and the dealers will in consequence pay more for them; this should be an additional reason for reducing the cost of game, in the legitimate way, to the dealers, so as to render all competition by the poacher out of the question. Add to these considerations the knowledge that a wide field for crime would be broken up, to the manifest lessening of the criminal business at our assizes, and of the heavy expense entailed on the counties by such cases.

The food of the Pheasant is of a very miscellaneous character; and although it is commonly considered that it inflicts an unmitigated injury upon the farmer, by the quantity of wheat, oats, barley, beans, and peas, which it consumes, yet we think when this portion of its history is read, it will be admitted that whatever positive injury it commits, it also does so large an amount of good to the farmer, that it may be fair matter for consideration and experiment, whether the good does not considerably outweigh the evil, where the birds are not permitted to increase beyond what reason and experience would point out as the proper limit to their numbers. No doubt this limit is often exceeded, and sometimes to such an extent as to oblige the landlord, in common justice, to return to the tenant half the rent of his farm, as compensation for the injury done to his crops by the game, of which Pheasants and Hares are usually the chief.

The food of the Pheasant varies considerably, according to the season of the year; in the autumn and winter its chief subsistence is derived from seeds of various kinds, such as acorns, of which it is very fond, hazel nuts, beech mast, haws, or the fruit of the whitethorn, hips, the seed vessels of the wild roses, wheat, oats, barley, beans, peas, buckwheat, and a long catalogue of seeds of wild plants, many of them very injurious to the farmer, but 'quæ nunc describere longum;' in addition to these it consumes, especially during the summer and autumnal months, a very considerable quantity of insects, which, if allowed to multiply, would do much damage to the crops.

In the spring and summer its food consists chiefly of roots of various kinds, some succulent plants, and an innumerable host of insects of all sorts. Among the roots on which it feeds at this time of the year, may be mentioned those of '*Potentilla anserina*,' '*Ranunculus bulbosus*,' the garden tulip, to which it is said to be extremely partial, and those of numerous other plants. The root of the Jerusalem artichoke is also a favourite, and the potato, particularly when boiled. Among the succulent plants may be named the young shoots of clover, young twigs of trees, grass, and the flowers of '*Ranunculus ficaria*,' one of our earliest flowering spring buttercups. Mr. Watters, in his little work on the "Birds of Ireland," says that on one occasion he found a field-mouse in the stomach of a Pheasant: this, we should think, must be of rare occurrence. To the above catalogue may be added the leaves and bulbs of the turnip, but only occasionally. Mr. Waterton recommends, as a valuable addition to a pheasantry, the planting a few roods with the

thousand-headed cabbage; the seed sown in April, and the young plants transplanted in June, two feet asunder. These afford very excellent food for the birds during the late autumn and winter, and are particularly useful when the ground is deeply covered with snow. This alone, however, is not a sufficient provision for the winter, and it becomes necessary, in order to prevent them from straying abroad in search of food, to supply them with it in the coverts. Beans and boiled potatoes are strongly recommended by Mr. Waterton as being far cheaper than oats or barley, much of which is devoured by Sparrows and other small birds. The food should be placed under yew trees, holly bushes, or the spruce fir, and it will then escape the Ring Dove and Rook.

Mr. Yarrell suggests that it is a good plan "to sow in summer beans, peas, and buckwheat mixed together, leaving the whole crop standing on the ground; the strong and tall stalks of the beans carry up, sustain, and support the other two, and all three afford together, for a long time, both food and cover."

Like other gallinaceous birds, the Pheasant always swallows a number of small stones, which are serviceable by enabling the gizzard to grind up the food, of whatever kind, into a uniform pulpy mass, which is then readily digested.

The pleasure which a sportsman will derive from the pursuit of any kind of game, cannot fail to be greatly increased by a knowledge of its habits. This knowledge is essentially necessary to a successful day's sport; and indeed all the customary rules for his guidance in the field are based on this knowledge, and, although a man may learn these rules by heart, without inquiring into the habits of the game which dictated them, he will doubtless be thus deprived of a very great additional pleasure, and could never, we imagine, be considered a true sportsman.

In sporting phraseology the terms applied to Pheasants are the following:—Two Pheasants are a 'brace;' three a 'leash.' The brood is called a 'ni,' 'nid,' or 'nide,' from the Latin 'nidus,' a nest. In putting Pheasants up you are said to 'push' or 'spring' them.

The time for Pheasant shooting is fixed by law to commence on the first of October, but it very frequently happens that the birds are then scarcely sufficiently grown, and this has induced many preservers of game to keep their preserves closed till a later day, sometimes even till the first of November. By this forbearance they not only secure finer birds, but also much more agreeable shooting, for by that time many of the trees will have lost much of their leafy covering, and consequently there will be less obstruction to the use of the gun. The shooting ends on the first of February.

During the day, particularly early in the season, Pheasants lie very close, and will almost allow you to walk over them; it is therefore absolutely necessary to beat every inch of the cover. This is usually done by spaniels, which for this purpose should be slow short-legged animals, which do their work quietly, and keep within reach of you. Many experienced sportsmen, however, prefer trusting the disturbance of the Pheasants

to men, who, by beating the bushes and thickets, effectually drive out the birds; and if the shooter keeps a little in advance of the beaters, he can hardly fail to have good sport, if there is any game in the cover. In this case a retriever is of course necessary to find the dead and wounded birds. In Pheasant shooting the hen birds, which are easily known by the shortness of the tail, are allowed to escape, so that the breed may be maintained. The penalty often exacted by the keeper for shooting a hen Pheasant is ten shillings; and it should always be enforced.

Having carefully gone over the covers, it will be advisable to examine and beat all the hedge-rows near them, for many of the Pheasants, on being disturbed in their cover, will run to them for shelter, and will afford by far the best shots.

Should the coverts be very wet, the birds will not remain in them, but take to the hedge-rows near for shelter. It is therefore desirable on such occasions to commence in the morning with the hedge-rows, and by keeping between the Pheasants and the cover, so as to cut them off from their places of security, you may be sure of some good sport.

When the young sportsman has got over the nervous feeling, which is very generally caused by the sudden whirr and rush of the Pheasant on rising, he will find it a bird easily shot, as from its large size and steady flight it offers a good mark to aim at. The time to fire is when it has finished its spiral-mounting flight on first rising, and just as it begins to make right away. The head should be aimed at, as the bird is thus less injured for the table, than if shot in any other part of the body. The quality of coolness and steadiness cannot be too much cultivated by the young shooter, and in Pheasant shooting this is doubly necessary. It is not an uncommon occurrence for the tyro to be so surprised on a Pheasant rising, as to be entirely incapacitated for bringing it down, and he will stand gaping, and with wide-open eyes, utterly unable to pull the trigger, or put the gun to his shoulder; should he however succeed in discharging his gun, it is a great chance if he takes any aim, and it will be well for any companion to keep out of harm's way, or he may possibly receive the benefit of his friend's fire instead of the Pheasant.

The Pheasant is, 'par excellence,' the game chosen for battu shooting; this kind of shooting we have always considered more like wholesale slaughter of the birds than fair sporting, and it certainly does not afford anything like the same pleasure as is derived from the pursuit of the Pheasant in a smaller way in the covers, or hedge-rows near them. Where birds are very plentiful, and have been kept unmolested for a particular day, when the cover is besieged with a large party of shooters, keepers, and beaters, the numbers shot by individuals are certainly often very great; but on such occasions he must be a bad shot who does not make a very large bag; he might do the same in any farm-yard, and with an exercise of nearly as much skill.

The nest of the Pheasant is of a very simple kind, and is composed of dry grass and

leaves; it is usually placed in woods in some clump of thick brush or underwood, or in a tuft of the long coarse grass so often found in such situations; clover fields are however not uncommonly selected, and afford good shelter. The number of eggs varies from eight or ten to fourteen, and occasionally even as many as sixteen or eighteen. It is found that the nearer the Pheasants approach domestication, the smaller is the average number of eggs in each nest; while the less they are interfered with, the more regularly do they lay from fourteen to sixteen eggs each.

In preserves, nests will nevertheless, sometimes be found with an unusual number of eggs; these are generally considered to result from more than one Hen Pheasant laying in the same nest. This is the more probable, as the eggs of even entirely wild birds have occasionally been found deposited in the nest of one of a different species; and Pheasants' eggs also have been met with in the nest of a Partridge.

The eggs of the Pheasant are in length about one inch and three-quarters, by about one inch and a half in breadth; they are of one uniform colour, a very pretty olive brown, which has a particularly chaste and pleasant effect.

The natural instinct of self-preservation guides the Pheasant to avoid, as much as possible, running to its place of concealment, which would necessarily leave a track as well as scent. It will accordingly very generally, on ending its flight, drop suddenly into the spot it has chosen for its hiding-place; and this is more particularly the case with the female when sitting, and by this admirable instinct she is thus able to preserve her eggs from the prowling Fox or Carrion Crow.

The Hen Pheasant, when leaving her nest voluntarily, covers her nest with leaves, etc., which secures them from the prying eyes of the Carrion Crow, Magpie, or Jay. When disturbed, however, this is of course omitted, but on these occasions she leaves the nest with extreme reluctance, and we have on several occasions seen her almost allow herself to be caught by the hand before she would take to flight. The young birds are hatched from the end of May to the beginning of July, and remain under the mother's protection till the end of August, or early in September, when they commence moulting, and assuming the plumage of the adult; having completed this by about the middle of October, they can only be known to be young birds by the shortness of their spurs.

The eggs of the Pheasant are very readily hatched under domestic poultry, and the kind which is most in request for this purpose is the small Bantam with smooth legs; they make excellent mothers, and this method of rearing young Pheasants is very valuable where the eggs have been exposed in mowing, or are deposited so near any thoroughfare as to endanger their being found. Poachers generally deal largely in these eggs, and at the period of incubation should be closely watched. Young Pheasants that have been hatched in this way, as we may say, artificially, require to be supplied plentifully with insect food, such as ants' eggs, of which they are very fond, woodlice, earwigs, beetles,

and grubs of all kinds. We have seen boiled vermicelli recommended, but cannot speak from experience, as to its fitness or otherwise. Young Pheasants when first hatched are covered with a soft down, and are able at once to run about and feed themselves. Female Pheasants, when confined, as in an aviary, make but indifferent mothers, and it is best to give any eggs so produced to the foster-mother above recommended.

The Pheasant is subject, like the common fowl, and other gallinaceous birds, to the presence of an intestinal worm, (*Fasciola trachea*, Montagu,) in the trachea or wind-pipe, and which produces death from suffocation caused by the inflammation and swelling of the lining membrane; this is greatly irritated by the little animal, which adheres to the surface by a sucker, and no doubt derives its nutriment from the mucous secretion of the part: Montagu recommends careful fumigation with the smoke of tobacco, as being the only remedy that can be depended upon. The powerfully depressing action of tobacco is well known to all physicians, and it is probable that its effect on the 'Fasciolæ' is to destroy life at once.

Many inveterate smokers might, if they would, derive a salutary lesson from the above relation, for, although the effect is not so powerful on them as on the unfortunate worm, yet tobacco cannot fail to exercise an injurious influence on the system, and we never yet knew any one much addicted to smoking whose digestive system was in an entirely healthy condition. The disease caused by the 'Fasciola' is commonly called the Gapes, and chiefly attacks the young birds. The application of the remedy is very simple, the birds are placed in a box, and tobacco smoke is blown into it from a tobacco-pipe; they cannot then fail to breathe the smoke, which coming into immediate contact with the worms, causes their destruction.

The occurrence of female Pheasants in a plumage very nearly resembling that of the male is by no means uncommon. The tail increases in length, the scarlet skin round the eye is developed, and the plumage generally assumes more or less that of the male bird. It however always, we believe, is duller in hue, and wants that extreme brilliancy which is so characteristic of the cock Pheasant. In these cases the change seems to depend either upon the advanced age of the bird, or else in younger birds upon a diseased condition of the ovaries; for none exhibiting this curious change of plumage have ever been known to breed. One which was bred on the estate of a friend of ours, and was remarkably tame and familiar, assumed this plumage at the age, we believe, of thirteen years. Similar changes occur occasionally in the domestic poultry, and the lordly Peafowl, and probably in most other birds of this order.

There is a variety of the Pheasant having a white ring round the neck, which is not uncommon, and which used to be considered a distinct species from the ordinary one, but is now proved to be only a variety, as it will breed with the Common Pheasant, and the presence of ring-necked birds in the young brood seems to be quite accidental.

In some districts, however, they prevail to a great extent; and Mr. Selby says that in his neighbourhood, (Twizel,) they have nearly superseded the common kind.

Pure white Pheasants, and individuals pied with white in every variety, are common enough, and some of these latter exhibit great beauty of markings. The pure white plumage is said to be assumed most frequently by the female bird, and those which have come under our notice have certainly borne out the remark.

Hybrid Pheasants are not very rare, but as they are always unproductive, they possess but little interest for the naturalist or sportsman, and it is only necessary to state that the cross with the domestic fowl is not uncommon, and that instances are on record in which the Pheasant has paired with the Black Grouse, Guinea Fowl, and even the Turkey, and an hybrid offspring has been produced.

The Pheasant, in our preserves, is certainly polygamous, and when the male bird has selected his 'beat,' he commences clapping his wings, and crowing, which is a defiance to any other male birds that may hear it, as well as a call note for the females; before, however, he can consider himself the lord and master of the latter, he must conquer and expel from his territory all of his own sex. We have qualified the assertion that this bird is polygamous, by saying that it is so in our preserves; under certain circumstances it is as certainly monogamous; on this point we quote the experience of Mr. J. R. Garrett, as detailed in Thompson's "Natural History of Ireland."—He says, "But I have on several occasions known the cock to accompany the hen and her young brood, 'leading them about,' until the latter were able to take care of themselves. In these instances the parent birds had, (as the species is prone to do,) strayed beyond their 'preserves' at the breeding season; and the circumstance of their having paired while thus enjoying full liberty, tends to confirm the view expressed by Mr. Macgillivray, (British Birds, vol. i., page 273,) where, speaking of the Rock Dove, he observes, 'It is monogamous, as I apprehend all wild birds, even the Gallinaceous, are.'"

There can be no doubt that observations upon the habits of birds in the partially domesticated state that our preserved Pheasants are, may prove erroneous as applied to the same birds in a state of nature, and we are inclined to believe with Macgillivray that these birds are really monogamous; and it is quite possible that the fact of strayed birds, like those mentioned in the above extract, bringing out larger broods than those that are more domesticated, as mentioned elsewhere, may be accounted for by pairing being the natural instinct, while polygamy is the result of the artificial state in which they exist in the preserves. We merely throw out this suggestion, which must be taken for what it is worth:—During the summer, autumn, and winter, the cock Pheasants associate together, and keep apart from the females entirely; the only exception is during the spring, and even then, when semi-domesticated and polygamous, the association, as we have above hinted, is not so perfect as might be the case in a complete state of nature.

At the beginning of the breeding season the cheeks of the Cock Pheasant assume a brighter scarlet; he becomes more stately in his walk, carries his tail erect, and hanging his wings down, puts on an appearance of greater consequence than at other seasons.

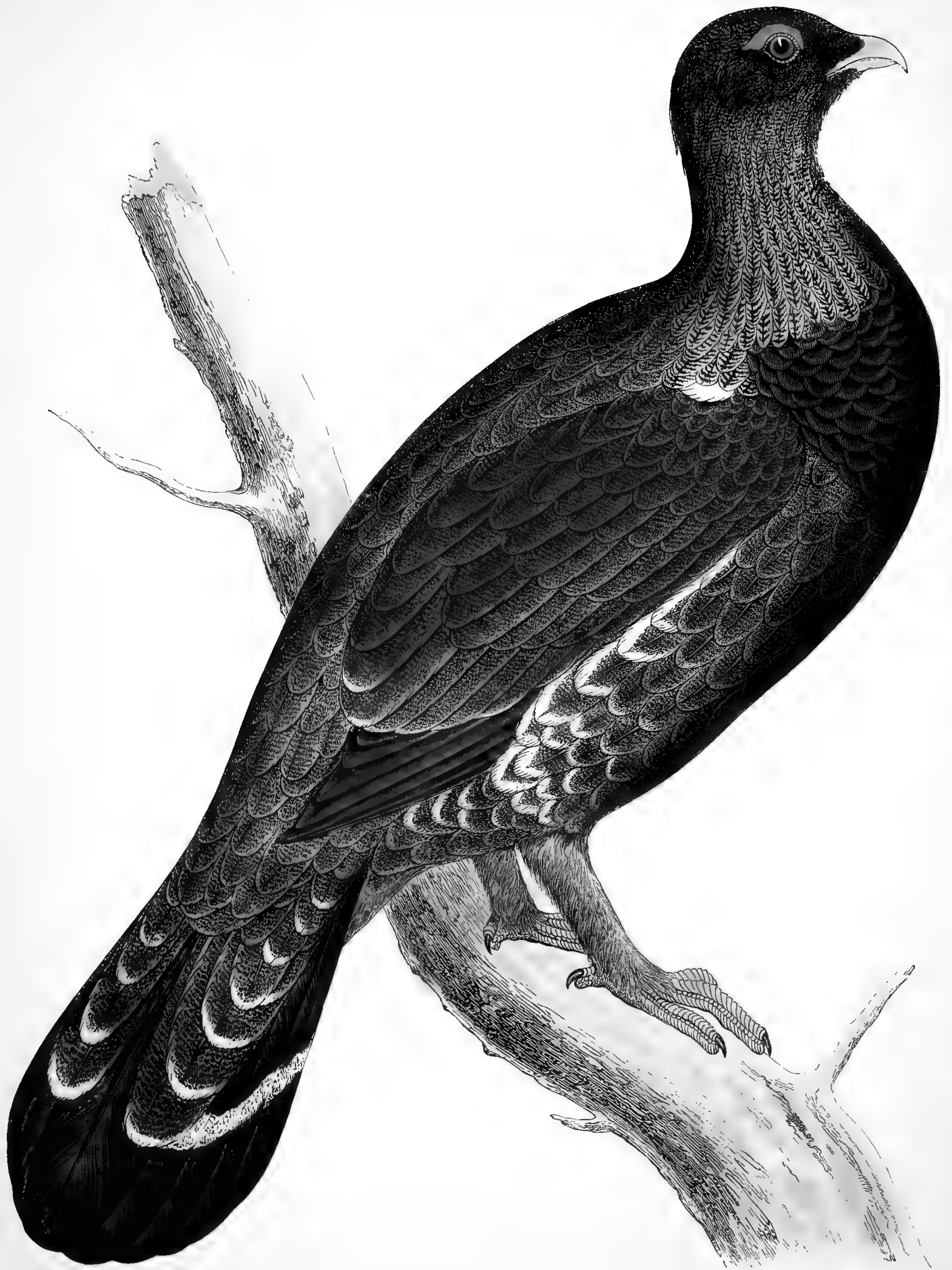
The adult Cock Pheasant has the bill of a light horn-colour; darker at the base. Irides, yellow hazel. The eyes are surrounded by a naked papillose skin, of a very bright scarlet colour, minutely dotted over with black specks; under each eye is a small patch of feathers of a dark spotted glossy purple. Crown of head, bronzed green, the feathers somewhat elongated; on each side of occiput is a tuft of dark golden-green feathers, erectile at pleasure;—very conspicuous in the pairing season. The rest of the head and upper part of the neck, deep purple, brown, green, or blue, as seen in different lights; lower part of neck and breast, reddish chestnut, each feather with a black margin; lower part of breast and sides the same, each feather largely tipped with black, reflecting glossy purple. Feathers of upper part of back, orange red, tipped with black; feathers of back and scapulars have the centre black, or spotted with black, outside which is a yellowish band, and the outer margin red-orange. Lower part of back and tail coverts, purplish red, tinged with green, purple, and other reflections—the feathers long and pendant; quill feathers, dull greyish brown, varied with pale wood brown; wing coverts, of two shades of red; centre of belly, thighs, vent, and under tail coverts, brownish black. Tail feathers, very long, the two middle ones the longest, occasionally measuring two feet; the outside ones, which are the shortest, are less than six inches long; all are of a reddish brown, with transverse lines of black, about one inch apart. Legs, toes, and claws, dusky; on each leg is a spur, which becomes sharp after the first year.

The female is less than the male; the whole plumage more sober; general colour light brown, varied with darker brown and black; the upper part of the neck in some lights shows iridescent reflections; space round the eye is feathered; breast and belly, dotted with small black spots on a light ground. Tail, short, but barred similarly to that of the male.

Young birds, till after their first moult, resemble the female in plumage.

In weight the Pheasant will commonly attain to about two pounds and a half, but Mr. Yarrell gives several instances where, under the combined influence of abundance of food and perfect quiet in the preserves, they attained the enormous weight of four pounds and a half. One brace, which together weighed over nine pounds, separately weighed one four pounds and a half, and the other a little over that amount.

The Cock Pheasant measures in length nearly three feet; the female measures only two feet, owing to the comparative shortness of her tail, and its somewhat smaller size.



CAPERCAILLIE.

COCK OF THE WOODS. WOOD GROUSE.

CEILIOG COED, OF THE ANCIENT BRITISH.

<i>Tetrao urogallus,</i>	.	.	.	.	LINNÆUS.
<i>Tetro auerhan</i>	.	.	.	.	TEMMINCK.

Tetrao—A Bustard. *Urogallus*, from *Urus*—A Buffalo, and *Gallus*—A Cock.

THIS magnificent and lordly bird was, when Great Britain and Ireland were more heavily timbered than at the present day, an abundant inhabitant of both countries, and, although, as the inhabitants increased, and the wood diminished, it gradually became more and more rare, till at length the breed became extinct; in Ireland, somewhere about 1760, till which date it lingered in the woods of Tipperary; and in Scotland about the year 1780, when the last was killed near Inverness. Still there is now every reason to expect that its very judicious and spirited introduction into their woods, by some of our largest landed proprietors, which has of late years taken place, will be abundantly successful, and that its very peculiar cry may again be not uncommonly heard in all our extensive plantations.

The history of its recent re-introduction into these islands is one of so much interest that we must not pass it over cursorily. The first attempt at again introducing this fine bird into this country was made in the end of 1827, or beginning of 1828, by Lord Fyfe. One pair was brought from Sweden, and the attempt was made at Mar Lodge, to naturalize them; it however failed, owing to the death of the hen bird immediately on her arrival in the country. The male bird paired with a barn-door fowl in 1828, and one hybrid chicken was produced, but was found dead soon after its exclusion from the egg. In January, 1829, another pair was imported, and in April the hen commenced laying, and laid altogether about two dozen eggs. Many of these she broke and eat, but eight were secured, and placed under a common hen; but one bird was produced, and it soon died. The next year the Hen Capercaillie laid eight eggs; one of these she broke, and sat on the others for five weeks, but they were all addled.

The year following, 1831, other eggs were produced, two of which were hatched by the mother, and four by a common hen. The time of incubation in both instances was twenty-nine days. Of these six but two survived after a few weeks, but they were alive in the spring of 1832. What was their ultimate history we do not know. It does not appear, however, that the experiment was altogether a successful one, though sufficiently so to induce renewed endeavours to effect the wished-for object.

In July, 1837, twenty-eight Capercaillies were presented to the Marquis of Breadalbane, by Thomas Fowell Buxton, Esq., who had procured them from Sweden direct, by the exertions of Mr. Lloyd, whose admirable work on the "Field Sports of Norway and Sweden," contains much and valuable information on the habits of this bird. Mr. Buxton having sent over his Irish gamekeeper, Lawrence Banville, with Mr. Lloyd, to Sweden, that he might take charge of the birds collected for Mr. Lloyd, and bring them to Taymouth Castle, the seat of the Marquis of Breadalbane, it will be interesting to give the keeper's own account of his proceedings in the following extract from his journal, which we take from Blaine's "Rural Sports:"—

"Saturday, April 1st., 1837. Yesterday I took leave of my little family, started on the coach to Norwich, and stayed there for the night. To-day I set out on the Ipswich coach. I halted at this town for the night, and agreed for a boat to take me down the river.—Sunday, April 2nd. This morning I set out, and arrived at the inn at Harwich about twelve o'clock: the wind in the right quarter for us to sail to Sweden.—Thursday, 6th. This day I helped to take Mr. Lloyd's things to a boat that was going to the yacht; as I was getting into it, I slipped in, and hit my leg against one of the thwarts of it: I hurt it very much.—Tuesday, 11th. This day we weighed anchor. I was sick in a few hours, as also the following day.—Monday, 17th. After a somewhat cold and stormy passage, we this day made the Swedish coast, and got on shore.—Thursday, April 20th. At nine o'clock on this day I gained the long-wished-for spot, Mr. Lloyd's house near Venusburg, and all seemed as pleased to see L. Lloyd, Esq. as I should be to see my worthy master after a long journey. There are thirteen of those great birds for me to see in the morning.—Friday, 21st. This morning I was up at an early hour, and saw the birds: they look well—only one hen, which I fear will not be long here. L. Lloyd, Esq. went to Troulhatten after the men to come to make the coops for the birds, which are about five feet in length, by three and a half in breadth, with a division in each of them to enable me to clean them out on the sea if all is well. This day I saw martins.—Thursday, 27th. This morning another cock came to us: I was happy to see it; a fine bird it is. I was chiefly receiving the birds this day. L. Lloyd and his men went out to fish.—Thursday, May 4th. This day I am happy to say that there are three of the coops fit for my birds.—Friday, 5th. I got the whole command of the birds this day. One old cock died yesterday. I shall

skin him. We had put the old cock in a cage by himself, and two in each apartment. This was a busy day with me, in doing all things for the birds.—Saturday, 6th. This morning I found the birds in the house were fighting; but what was the cause I knew not. I now and then put some of them into other apartments to see if it would be over; they were, however, not so easy to be put off, for one of their legs was broken. We were forced to put them in the coops by themselves. I was so sorry to see them fight, as I did not know when it would be over. We were all employed after the birds, as they seemed to be coming from the forest to us in good style. The cock that died weighed nine pounds. My leg was very painful to me.—Wednesday, 10th. This morning I did all things for my feathered tribe. The cock that I said was hurt; this day he is dead; his leg was broken in two places.—Saturday, 13th. This day I skinned two of the great cocks, and as I was dressing the skin of one of them, a drop of the stuff flew in the corner of my right eye: it is very painful to me. I keep watching every day for some of the eggs, but no sign of them yet.

Sunday, 14th. This day I was obliged to keep at home to keep the people from tormenting my little feathered family, as I had them now to attend to in this country. They all look well, with the exception of one hen. She feeds well, but did not go up to the roost.—Monday, 15th. This is a great holiday with them in this part of the world. We got a hen, (Black Game,) also some eggs. I went into the woods with a man, to see if he could show me a kind of grass the birds are fond of; but I am sorry to say it was not grown that he could find it. We again returned home with plenty of moss out of the woods to make some nests for the hens to lay in, in my houses, or to try if they would lay in them; they are all doing well, and I am happy to have it to say of L. Lloyd, Esq. that he is doing all in his power to get all he can for my master, as he says there were four or five dozen on the road, or ten, or perhaps more. Cold at night. It rained this day.—Wednesday, 17th. At this present time we have only one Capercaillie's egg, two Black Game eggs; they call them 'arro' in this part.—Saturday, 20th. A man came to inform Mr. Lloyd that he had got a Capercaillie in a house, also a Blackcock, one egg of the Black Game, and four of the Capercaillie.—Monday, 22nd. This morning I was well pleased to hear the Black Game that were in the house playing the same as when in the wood. It is a fine bird. The Capercaillie cocks have played a long time, which is amusing to any one to hear them.—Sunday, 28th. I waited on my birds. It is hard work on Sundays to keep the people from tormenting my birds, and I do not like to be too hard on them.—Tuesday, 30th. I was chiefly fishing; as to my birds I had them all settled in the coops; it put me out to find at night that the housekeeper wanted Mr. Lloyd to alter the birds again; but I asked his honour for what did he want to do so? is it not an old saying, 'let well alone?' which he agreed with. Any wild creatures the more seldom they are disturbed, the better for the birds or beasts; also for them

that have them under their care.—Thursday, June 1st. I stopped at home attending to my birds; they were all well except one, which was either dead or killed; but it was very much torn by the rats. I went into the woods and got trees for them.

Tuesday, June 6th. Now this was rather a day of joy to me, after, it was a day of torment to me—now all was to be got ready to put the birds into the coops also; first one thing was to be done; all in a minute, it was to get boards and nail them on the boat, so that we could put the two sets of coops in it, with them facing each other; so that I could walk between them, to feed and water them on the river. On our way to Gottenburgh, as we were to be there on Thursday at the longest, any one may think what a day it was to me, how to get all this done by the close of night. Now came the grand points. It was to put the birds in order for their long journey, which I had to do by myself. I must say I had not time to think of anything, but run from one place to the other; but in a word all was the same. Now, at ten o'clock, I got into the house to get those wild birds; they are chiefly hens; I got them all in safety into the coops: seven of the Black Game and two of the others into one coop, five cocks into another, four cocks into another, seven hens in another, also four cocks: in this manner we put them—seven hens in a coop by themselves; by this I think there are thirty-six birds under the six coops this night,—I may say a wet weary night to me—up to ten o'clock the night wet and cold. I got wet through; but that was little to be wondered at, as we had to carry the six coops full two hundred yards or more. I got a drop of coffee at one; then I took a big coat and a bunch of straw to the boat for my bed; but as ill-luck would have it to be, the rain came in in all parts where poor Larry was to take up his quarters; so by that I was forced to sit under the coops in the best manner I could, and I was as cold as ever I felt in my life: but this was not all; to add to my misery, the birds that I put in the coops were flapping against the coops to that degree, that I thought by the clear daylight I should have them all dead in the coops. I was waiting for daylight to appear.—Wednesday, 7th. As soon as I could take a look at them, it may be expected I did, to my surprise the coops of two of them were almost covered with feathers and blood. I then felt what I never thought of in my life, to see them in such a state; so I took up my blinds off them, and gave them all plenty of boughs and corn; I went up and got them up at the house; I went to the bed-room of Mr. Lloyd, and informed him of the state of them on board; by that he got up in a few minutes. All things were got in order for our voyage down the river, and we left the shore. The birds by this time were become settled, unless we went near them.

Thursday, June 8th. This day we arrived at Gottenburgh. We went to the boats, then to the schooner, which was to take me and my birds to Hull. We got the birds on board; they seemed well pleased to get them, to bring the birds over to England with them, as they said it was the greatest thing that ever was heard of in this life,

to see so many of the birds alive and looking well.—Saturday, 10th. This morning they ran down to the castle; then we got down to the mouth of the river: the wind was so that we could not get out; but at seven o'clock they weighed anchor, and now I took my last sight of the Swedish shore.—Sunday, 11th. At twelve o'clock they were out in the main ocean fifty-four miles; my birds were all right, they seemed to feed well.—Monday to Wednesday the birds were well.—Thursday I thought one was dying, but it recovered in a short time.—Friday and Saturday all well.—Sunday, 18th. This day the birds in one coop were very angry with each other; but I put them by themselves—wild and tame will not do well in the same coop. This evening we came close under the Yorkshire coast; we were in sight of the fields and houses.—Monday, 19th. We went on shore at Hull; the birds feed well at present.—Wednesday, 21st. I got all my birds on the steamer quite safe: they are all on the quarter-deck.—Thursday, 22nd. This day was a fine one; the birds were all well. Nothing happened worth notice on the passage.

Saturday, 24th. This morning I set out from Dundee with a cart and mule, with four more, to the place where the birds came; they were all in the best of health; I got them up to the inn, fed them, and put the coops all in a settled place, and then got all things ready for packing them into my small baskets, that I had brought with me for the purpose from Sweden, and started off with a great many good wishes for our safe arrival. On my arrival at Taymouth Castle I put up my birds as well as I could for the night.—Sunday, 25th. I found the birds as well as I could expect; they all fed well. I must say that there are some of the birds' heads stripped almost of their feathers, striving to get out of the small places where they are cooped up.—Tuesday, 27th. The house intended for the birds being completed, I went and put them all in it; the hens into one end, and the cocks into the other.—Wednesday, 28th. I went to see the birds; the most of them were up at the top of the house, and had eaten of the trees that were there.—Monday, July 3rd. To this time the birds were well. On this day I started by the mail-cart for Inverness, where I arrived (having stopped on the road) on the following Saturday.—Thursday, 13th. After an excursion to Sir G. Sinclair's I returned, and arrived this day once more at Perth; set out for Dundee; and, on Saturday, 15th., got on board the Forfarshire, from which I was put down at Sheringham in safety on Thursday, the 20th."

In the autumn some of these birds were turned out into the woods, the others being kept in confinement. In 1838 the keeper reared one brace, and two fine broods were produced in the woods. This summer sixteen more hens were imported, making altogether thirteen cocks and twenty-nine hens. The experiment of rearing by hand does not appear to have been very successful, and led to the ingenious and effective method of placing the Capercaillie's eggs, produced in confinement, under the Gray Hen, or female Black Grouse. This plan seems to have answered remarkably well, and numerous fine

broods, of eight or ten each, have been the result. Several broods were also produced by the Capercaillie that had been turned out, thus placing beyond the possibility of doubt, the fact that, with proper care and attention, these birds may be induced to breed in our larger woods and preserves. The ultimate effect of this well devised and admirably conducted experiment yet remains to be seen. Whether the protection afforded them will be sufficient to keep in check the inroads of the poachers, whose cupidity cannot but be excited by the prospect of securing so large and valuable a bird; or whether they will be so far destroyed illegally, as to render their preservation from entire destruction merely a matter of curiosity, remains yet to be seen. Certainly the climate is not likely to interfere with its complete naturalization, for we find it inhabiting Norway, Sweden, Northern Russia—both in Europe and Asia, Germany, Hungary, and some parts of the Alps. In fact, wherever very extensive pine forests afford it food and shelter, there it is found in more or less abundance.

We have various accounts as to the desirableness of the Capercaillie as an article of food. By some they are pronounced to be coarse and ill-flavoured; by others they are considered, particularly the females, to be excellent. Mr. Greiff, a Swedish gentleman of high rank as a sportsman, says, as quoted by Mr. Lloyd, "of the supply this bird furnishes to the larder, and the delicious dish it forms, when brought to table, every one knows the value." We have on several occasions partaken of this bird at table, and although we should not say it was coarse or disagreeable, still it certainly possessed somewhat the turpentiney flavour one might expect it to have when feeding on the pine leaves.

This discrepancy in the accounts of the Cock of the Woods, as a bird for the table, may, we think, probably be very readily explained. The times when we have had opportunities of tasting this bird were on each occasion rather late in the winter, when they had, for a considerable period, been feeding on the pine leaves chiefly; we can easily conceive this bird in autumn, when feeding on the various wild berries, then so prevalent, to be very superior in flavour to one, which for several months had subsisted almost wholly on the turpentiney leaves of the pine.

In describing the habits of the Capercaillie, we must have recourse entirely to the accounts of others, never having ourselves had any opportunity of seeing it even alive, much less in a state of nature. It is well that we have such admirable and trust-worthy accounts of its manners and habits from the pen of Mr. L. Lloyd, to which we have before referred.

The favourite haunts of the Cock of the Woods are extensive pine forests, in these it usually remains during the whole year; and is seldom or never found in coppices or small cover. Some, however, occasionally breed on the sides of the lofty mountains, but as the cold increases, and deep snow lies on the ground, they generally betake themselves to the lower and more sheltered grounds. "Excepting there be a deep snow, the Caper-

caillie is much upon the ground in the day-time; very commonly, however, he sits on the pines." During the night he usually roosts in the trees, but if the weather is very severe, he buries himself in the snow for warmth and shelter. Mr. Lloyd says that the flight of the Capercaillie is not heavy for so large a bird; and that the noise it makes during flight, is not greater than you would expect from a bird of its dimensions. Although this bird usually takes but short flights, he will, on some occasions, rise to a considerable height in the air, and take a flight of several miles at a time. As before stated, the Capercaillie perches much in the pines, and will most frequently be found in the winter sitting on the highest branches of these trees.

"Even in his wild state, the Capercaillie occasionally forgets his inherent shyness, and will attack people when approaching his place of resort. Mr. Alderberg mentions such an occurrence:—During a number of years an old Capercaillie Cock had been in the habit of frequenting the estate of Villinge, at Wermdö, who, as often as he heard the voice of people in the adjoining wood, had the boldness to station himself on the ground, and during a continual flapping of his wings, pecked at the legs and feet of those that disturbed his domain.

Mr. Brehm, also, mentions in his "Appendix," page 626, a Capercaillie Cock that frequented a wood a mile distant from Renthendorf, in which was a path or road-way. The bird, as soon as it perceived any person approach, would fly towards him, peck at his legs, and rap him with his wings, and was with difficulty driven away. A huntsman succeeded in taking this bird, and carried it to a place two miles (about fourteen English) distant; but on the following day the Capercaillie resumed its usual haunt. Another person afterwards caught him, with a view of carrying him to the Ofwer-Jägmästare. At first the bird remained quiet, but he soon began to tear and peck at the man so effectually, that the latter was compelled to restore him to his liberty. However, after the lapse of a few months, he totally disappeared, probably having fallen into the hands of a less timid bird-catcher."

Early in the season, if the Capercaillie is disturbed only by the dog, it seldom flies far, and soon perches again. Later in the season they become excessively wild, especially the cocks. "Towards the commencement of, and during the continuance of winter, the Capercaillies are generally in packs; these, which are usually composed wholly of cocks, (the hens keeping apart,) do not separate until the approach of spring. These packs, which are said sometimes to contain fifty or a hundred birds, usually hold to the sides of the numerous lakes and morasses, with which the northern forests abound; and to follow the same in the winter-time with a good rifle is no ignoble amusement."

When speaking of the habits of this bird, during the period of incubation, Mr. Lloyd says, "At this period, and often when the ground is deeply covered with snow, the cock stations himself on a pine, and commences his love-song, or 'play,' as it is termed in

Sweden, to attract the hens about him. This is usually from the first dawn of day to sunrise, or from a little after sunset until it is quite dark. The time, however, more or less, depends upon the mildness of the weather, and the advanced state of the season.

During his play, the neck of the Capercaillie is stretched out, his tail is raised, and spread like a fan, his wings droop, his feathers are ruffled up, and, in short, he much resembles in appearance an angry Turkey Cock. He begins his play with a call something resembling 'Peller, peller, peller;' these sounds he repeats at first at some little intervals, but as he proceeds they increase in rapidity, until at last, and after perhaps the lapse of a minute or so, he makes a sort of 'gulp' in his throat, and finishes with sucking in, as it were, his breath. During the continuance of this latter process, which only lasts a few seconds, the head of the Capercaillie is thrown up, his eyes are partially closed, and his whole appearance would denote that he is worked up into an agony of passion. At this time his faculties are much absorbed, and it is not difficult to approach him; many, indeed, and among the rest Mr. Nilsson, assert that the Capercaillie can then neither see nor hear; and that he is not aware of the report or flash of a gun, even if fired immediately near to him. To this assertion I cannot agree; for, though it is true that if the Capercaillie has not been much disturbed previously, he is not easily frightened during the last note, if so it may be termed, of his play; should the contrary be the case, he is constantly on the watch, and I have reason to know that, even at that time, if noise be made, or that a person exposes himself incautiously, he takes alarm, and immediately flies.

The play of the Capercaillie is not loud; and should there be wind stirring in the trees at the time, it cannot be heard at any considerable distance. Indeed, during the calmer and most favourable weather, it is not audible at more than two or three hundred paces.

On hearing the call of the cock, the hens, whose cry in some degree resembles the creak of the Raven, or rather, perhaps, the sounds 'Gock, gock, gock,' assemble from all parts of the surrounding forest. The male bird now descends from the eminence on which he was perched, to the ground, where he and his female friends join company.

The Capercaillie does not play indiscriminately over the forest; but he has his certain stations, (Tjaderlek, which may perhaps be rendered his playing-ground;) these, however, are often of some little extent. Here, unless very much persecuted, the song of these birds may be heard in the spring for years together. The Capercaillie does not, during his play, confine himself to any particular tree, as Mr. Nilsson asserts to be the case; for on the contrary, it is seldom he is to be met with exactly on the same spot for two days in succession. On these 'lek' several Capercaillie may occasionally be heard playing at the same time; Mr. Greiff, in his quaint way, observes, 'it then goes gloriously.' But so long as the old male birds are alive, they will not, it is said, permit the young

ones, or those of the preceding season, to play. Should the old birds, however, be killed, the young ones, in the course of a day or two, usually open their pipes. Combats, as it may be supposed, not unfrequently take place on these occasions; though I do not recollect having heard of more than two of these birds being engaged at the same time.

The Capercaillie occasionally strikes up a few notes in the manner of which I have spoken, during the autumnal months—about Michaelmas, I believe. For this it is, perhaps, difficult to assign a reason. Mr. Greiff suggests, 'that it may be to show the young birds where the 'lek' is situated.' I have never myself heard the Capercaillie playing at this period of the year; but I have met with men, on whose word I am inclined to place confidence, who have repeatedly killed them at that time, whilst so occupied.

The Capercaillie lives to a considerable age; at least so I infer from the cocks not attaining their full growth until their third year or upward. The old ones may be easily known from their greater bulk, their Eagle-like bill, and the more beautiful glossiness of their plumage."

The Capercaillie is, as may be gathered from the above extracts, polygamous; and as soon as the hens begin to sit, they are deserted by the males, who skulk about among the brushwood, till their plumage is renewed.

With regard to the methods adopted by poachers in this country for the capture of the Capercaillie, we know nothing, but it is probable that somewhat similar devices are used to those so successful in the destruction of the Pheasant. In Norway and Sweden so different are the ideas of sporting to ours, that the regular sportsman there adopts measures for its capture, which we should here consider most unsportsmanlike, and such as would only be used by the poacher. Custom, however, is everything, and there can be little doubt that the modes of capture we are now about to relate, will frequently fill the game bag, when it would otherwise have returned empty. Mr. Lloyd says that "During the autumnal months, after flushing and dispersing the brood, people place themselves in ambush, and imitate the cry of the old or young birds, as circumstances may require. The manner in which this is practised may be better understood from what Mr. Greiff says on the subject.—

'After the brood has been dispersed, and you see the growth they have acquired, the dogs are to be bound up, and a hut formed precisely on the spot from whence they were driven, in which you place yourself to call; and you adapt your call according to the greater or less size of the young birds. When they are as large as the hen, you ought not to begin to call until an hour after they have been flushed; should you wish to take them alive, a net is placed round him who calls. Towards the quarter the hen-flies, there are seldom to be found any of the young birds, for she tries by her cackling to draw the dogs after her, and from her young ones. So long as you wish to continue

your sport, you must not go out of your hut to collect the birds you have shot. When the hen answers the call, or lows like a cow, she has either got a young one with her, or the calling is incorrect; or else she has been frightened, and will not then quit her place. A young hen answers more readily to the call than an old one.'

This must be a most destructive system, and would, we should think, almost lead to the annihilation of the game, if carried on to any extent. The following is Mr. Greiff's account of the various devices adopted in Scandinavia for the capture of the Capercaillie, and other birds of similar habits:—'Most of the forest birds are caught in the autumn by bird-lime, or the usual snares, and also by nets. In all these methods, it is necessary to lead the bird by low rows of brushwood into small pathways; with snares of fine brass-wire suspended over these he is easily caught. One of my own methods, by which I have amused myself, and taken many birds alive, is by a simple knotted square silk net, of thirty inches width in the square, and the meshes so large, that the Capercaillie can easily put his head through; this is to be hung over the pathway, and fastened slightly to small branches, by weak woollen yarn, just sufficient to support the net in a square form, with some small twigs and leaves of the fir spread over it; round the net a silk line is passed through the extreme meshes, and fastened to a stout bush. When the Capercaillie has got his head into the mesh of the net, and finds that something opposes him, he always runs directly forward, when the silk line is drawn close, and the bird lies as if in a reticule, with his wings pressed to his body, unable to move himself, or to tear the net, however weak it may be, although it should always be made of twisted silk. In the autumn, when the cranberry is plentiful in the forest, by strewing these berries on each side of the net, you entice the birds to advance eagerly. This sport produces much amusement. One night, when a sufficiency of snow fell to enable me to trace them, three Wolves passed within ten paces of a Capercaillie, who had been caught in the net the night before; still the Wolves never injured the bird.'"

Other methods are also mentioned by Mr. Lloyd, by which a great destruction of the Capercaillie is effected. "In other instances, the Capercaillie is shot in the night-time by torch-light. This plan, which is said to be very destructive, is, I believe, confined to the southern provinces of Sweden, for in the more northern parts of that country I never heard of its being adopted. In Smaland and Ostergöthland, this is said to be effected in the following manner:—Towards night-fall people watch the last flight of the Capercaillie before they go to roost. The direction they have taken into the forest is then carefully marked, by means of a prostrate tree, or by one which is felled especially for the purpose. After dark, two men start in pursuit of the birds; one of them is provided with a gun, the other with a long pole, to either end of which a flambeau is attached. The man with the flambeau goes in advance, the other remaining at the prostrate tree, to keep it and the two lights in an exact line with each other; by this curious

contrivance they cannot well go astray in the forest. They thus proceed, occasionally halting, and taking a fresh mark, until they come near to the spot where they have reason to suppose the birds are roosting. They now carefully examine the trees, and when they discover the objects of their pursuit, which are said stupidly to remain gazing at the fire blazing beneath, they shoot them at their leisure. Should there be several Capercaillie in the same tree, however, it is always necessary to shoot those on the lower branches in the first instance; for, unless one of these birds falls on its companions, it is said the rest will never move, and, in consequence, the whole of them may be readily killed."

It appears, however; that the most destructive operations are carried on against the poor Capercaillie during the breeding-season. At this time the gunner, taking advantage of the complete abstraction of the cock bird when at his 'play,' approaches carefully, waiting always till the bird has nearly come to the end of his song, before venturing to move; he is however only able to advance a few steps—three or four, and must there remain like a statue, till the bird again arrives at the same point of his play, when another advance of a few feet is made, and so on till he is within easy shot. As might be expected, the poor cock Capercaillie is generally the only sufferer on these occasions; were it otherwise the breed would soon become extinct.

The food of the adult Capercaillie when wild, appears to consist chiefly of the leaves of the Scotch fir, (*Pinus sylvestris*, Linnæus, or Tal, as it is termed in Sweden;) while the leaves of the common spruce fir, (*Abies excelsa*, Lindley, called Gran in Sweden,) are but very rarely eaten. The buds of the common birch, (*Betula alba*, Linnæus,) also afford it a portion of its subsistence during the months of winter. In the autumn it eats the berries of the juniper, (*Juniperus communis*, Linnæus;) the cranberry, (*Oxycoccus palustris*, Persoon;) the whortle-berry, (*Vaccinium uliginosum*, Linnæus;) and numerous other berries which are at that time common in the forests.

The food of the young birds is, like that of some of our other game birds, chiefly confined to insects of various kinds, ants, worms, etc.

When in a semi-domesticated state they require to be fed with corn; probably any of the cereals, or beans, or peas would be suitable; but they must also be supplied with the twigs of the spruce fir, pine, and juniper, freshly gathered. On such diet as this they have been kept in a healthy condition through the winter in a large loft in Dalecarlia; but during the summer they had more liberty, and bred freely.

As to the food suitable for the young birds reared in this domesticated condition, Mr. Greiff makes the following judicious remarks:—"They are to be supplied with ants' eggs in conjunction with the materials of which the hills of those insects are composed; hard-boiled eggs are to be chopped and mixed amongst fine moistened barley-meal; also pea-haulm and trefoil grass. They must have plenty of water, which must be placed so

that they cannot overturn the pitcher, for they suffer very much if they get wet when young. Dry sand and mould they should never be without; when they get larger, and cabbage-leaves, strawberries, and cranberries, and blue-berries are to be had, they are fond of such food; and when they are full grown, they eat barley and wheat; and in winter they should get young shoots of pine and birch buds. I have seen many people who thought they treated young birds well by giving them juniper berries; but they never resort to this kind of food but in case of necessity."

The usual method of shooting the Capercaillie by the Scandinavian sportsman is the following:—Mr. Lloyd says, "At this period of the year of which I am now speaking, (the autumn,) I usually shot the Capercaillie in company with my Lapland dog, Brunette. She commonly flushed them from the ground; where, for the purpose of feeding upon berries, etc., they are much during the autumnal months. In this case, if they only saw the dog, their flight in general was short, and they soon perched in the trees. Here, as Brunette had the eye of an Eagle, and the foot of an Antelope, she was not long in following them. Sometimes, however, these birds were in the pines in the first instance; but as my dog was possessed of an extraordinary fine sense of smelling, she would often wind, or, in other words, scent them from a very long distance. When she found the Capercaillie, she would station herself under the tree where it was sitting, and by keeping up an incessant barking, direct my steps towards the spot. I now advanced with silence and caution; and as it frequently happened that the attention of the bird was much taken up with observing the dog, I was enabled to approach until it was within the range of my rifle, or even of my common gun. In the forest, the Capercaillie does not always present an easy mark when he takes wing from the trees; for, dipping down from the pines nearly to the ground, as is frequently the case, they are often almost out of distance before one can properly take aim. No. 1 or 2 shot may answer very well, at short range, to kill the hens; but for the cocks, the sportsman should be provided with much larger.

The above plan of shooting the Capercaillie is very commonly adopted throughout Scandinavia; and, during the autumnal months in particular, is occasionally attended with considerable success. But I do not speak from much experience, as, at that period of the year, my time has in general been otherwise occupied. I have, however, killed five of these birds in a single day."

Mr. Lloyd had never used pointers when searching for Capercaillie, but thinks that if steady, and well under command, they would answer very well early in the season; but he inclines to give the preference to such a dog as his Brunette. Mr. Greiff says, "They (the dogs) ought to be rather small; not to bark violently, but only now and then; to hunt only at a short distance from the sportsman; to have a good and sure scent, and to be easily called in. When the frosty nights commence, the Capercaillie sits better to the cocker than at other times."

The nest of the Capercaillie hen is placed upon the ground in some quiet and secluded situation. She lays from six to twelve eggs, on which she sits for twenty-nine days. The young birds run as soon as they are hatched; they remain with the mother till towards the winter, but the cocks leave her sooner than the hens.

The eggs "are two inches three lines long, by one inch eight lines in breadth, of a pale reddish yellow brown, spotted all over with two shades of darker orange brown."

Like other birds the Capercaillie is occasionally found to vary in its plumage; Mr. Lloyd mentions a hen which, with the exception of a few gray feathers, was entirely white. The same gentleman asserts that "The Capercaillie occasionally breed with the Black Game; the produce of which are in Sweden called 'Racklehanen;' (the 'Tetrao medius' of authors;) these partake of the leading characteristics of both species. But their size and colour greatly depend upon whether the connexion was between the Capercaillie cock and the Gray hen, or 'vice versâ.' Out of twenty 'Racklehanar,' which is the male, two, according to Mr. Falk, are not alike; and the difference of colour, observable among the 'Racklehönan, which is the female, but which are very rare, is still greater. 'Racklehanen' are very seldom to be met with. During my stay in Wermeland, however, Mr. Falk had two of these birds in his possession, and I myself shot a third."

Many people think that the 'Tetrao medius' is a distinct species, but we confess that we are inclined to consider, with Mr. Lloyd and Mr. Falk, that it is only a hybrid.

The Capercaillie, in its native forests in the north of Europe, is undoubtedly polygamous, and in any attempt to preserve it in this country, it will be absolutely necessary to keep down the males, so as not to allow them to approach to anything like an equality in numbers with the females. The rule which is generally adopted by sportsmen, in Pheasant shooting, to spare the hens, must be adopted in shooting the Capercaillie also.

In the adult male the bill, which is large, strong, and hooked, is of the colour of horn. The nostrils are small, and nearly concealed under some short feathers, which extend under the throat, and are much longer there than the rest, and are of a black colour. Irides, hazel; over each eye there is a patch of naked skin, of a bright scarlet colour. The feathers of the head and neck are beautifully speckled with grayish white on a brownish black ground; those on the head and throat rather elongated. The back and upper tail coverts, marked like the head and neck, but not so regularly. Breast, black, richly glossed with dark green at the upper part, and with a few white feathers on the body and thighs. Wings, dark brown, mottled with light brown; wing coverts, the same; under wing coverts, white, showing on the shoulder like a white patch. Sides and flank have the feathers of brownish gray, speckled with black. Tail feathers, eighteen in number; are black, the outside ones with a few white spots. Legs, very strong, covered with brownish gray feathers. Toes and claws, black.

The adult female has the bill dark horn, paler at tip. Irides, as in the male. Head

and all the upper parts are ochre brown, barred with black or dark brown. Front of neck and breast are brownish orange. The breast feathers, narrowly edged with gray, inside which is a slight band of black. Legs, covered with grayish brown feathers. Toes and claws, pale brown.

The young birds, of both sexes, resemble the female till the first moult, and the males take three years to acquire the full adult plumage.

The weight of the adult male, Mr. Lloyd says, varies much in different localities: thus, in Lapland they seldom exceed nine or ten pounds; in Wermeland they will reach thirteen pounds; while in the southern provinces of Sweden they will reach seventeen pounds and upwards.

The hen Capercaillie seldom much exceeds five or six pounds.

In length the adult male Capercaillie will of course vary considerably; but its usual length will be from two feet nine to three feet four inches. The females vary from one foot ten to two feet two or three inches in length.



BLACK GROUSE.

BLACK GROUSE.

BLACK COCK. GRAY HEN.

<i>Tetrao tetrix</i>,	.	.	.	.	LINNÆUS.
<i>Tetras Birkhan</i>,	.	.	.	.	TEMMINCK.

Tetrao—A Bustard.*Tetrix*, *Quere*, *Teter*—Black or dark.

THE Black Grouse being a natural inhabitant of Great Britain, and not an introduced bird, is, as might be expected, very generally distributed wherever situations agreeable to its habits are found. In the south of England it occurs in the New Forest, in Hampshire; in Devonshire, near Axmouth, and on the wild country of Dartmoor, Sedgemoor, and Exmoor, as well as on Lord Caernarvon's estates near Dulvarton; in Sussex, on Ashdown Forest; in Surrey in several localities—one female is mentioned by Mr. Alfred Newton as having been picked up dead, and a male seen at Elvedon, in Suffolk; one female was shot in Oxfordshire in 1836, as recorded by the Revs. A. and H. Matthews. In Somerset, they also occur on the higher ground near Taunton, and elsewhere; in Worcestershire, Staffordshire, Derbyshire, Lancashire, Yorkshire, Cumberland, and Northumberland; becoming more plentiful as we proceed north, till in Scotland it becomes abundant. It is plentiful in Sutherland wherever it has any protection; and according to Macgillivray, is found in the Isles of Mull and Sky, but not in Orkney or Shetland. A few are met with in Wales. In Ireland it does not exist; and from what Mr. W. Thompson states, it is very doubtful whether any have ever existed there but those brought over and turned out with the hope that they would breed. This hope, however, does not appear to have been ever realized; some natural or local cause seems to have interfered in each instance, although every care and protection was offered the birds that anxiety for their increase could have dictated.

The following accounts of this attempted introduction into Ireland are interesting, and we give them in the hope of directing particular attention to the providing the young, in any future experiments, with the food which they seem to require, and which in these instances was wanting. We take them both from Mr. Thompson's "Natural History of Ireland." The first is a letter to Mr. Thompson from C. Redmond, gamekeeper to Viscount

O'Neil, at Claggan, dated January 1st. 1841:—"Twelve years ago, (two years previous to my coming here,) there were four brace of Black Game turned out, a cock and hen which I frequently met with outside the plantations in the heath, my dogs setting them like Grouse. They were never to be seen together, but kept a mile separate, and each of them always about the same place. The hen I found dead three years ago, and supposed her to have been shot at by a party which Lord O'Neil had here at that time; the cock has left us or been killed also. I saw a cock that was shot last year at Glenariff, near Cushendall, (some miles distant,) which may have been the same. I was at the letting out of nine Black Game in 1832 in this place, and a single bird I never saw afterwards. The reason I cannot assign; it might be that they wandered away, which I believe they are prone to do, or were hurt in coming from Scotland, and died." So far C. Redmond.

The next account is from John Inglis, gamekeeper to Edmund Mc' Donnell, Esq., at Glenarm Park, also in January, 1841. He says—"In reply to your note regarding Black Game, I am sorry I cannot give a very flattering account of them. There has been one Black Cock here about four years; I have not seen him for the last four or five weeks, but I suppose him to be still alive. I think it is likely he came from Claggan, as I believe Lord O'Neil turned out some there shortly before the bird was seen here. (The places are about fifteen miles apart.) At the beginning of August, 1839, I went to Scotland, and got nine young birds at Douglas Castle. Two of them died on the passage; I turned out the remaining seven on the hill near the place where the old cock used to haunt; but none of them that I know of were ever seen afterwards. The reason I assign for their not succeeding at this time is, that they were too young, and not fit to manage for themselves without the help of the old bird. In November, 1839, I again went to Douglas Castle, got six brace of full-grown birds, namely seven hens and five cocks; I got them all safe over to Glenarm, where I kept them for two days, feeding them on corn till they recovered from the effects of the passage. I turned them out in the park quite strong and healthy to all appearance. Some time after, one of the cocks was found dead in the park; he was quite light and thin of flesh. Another of the cocks was shot about the same time in Glenariff, about eight miles from Glenarm: a few of them kept about the park all winter. Sometimes one would be seen, sometimes two, and in the month of March there were three hens and one cock seen together; but about the beginning of May all the hens disappeared, and none of them have been seen since. One cock kept the park all summer, and was seen lately, which is all that I know of here out of the twelve brought over. A cock was shot about two months ago by a gentleman near Ballycastle, (about twenty miles distant,) which is likely to be another of them. Where all the hens have gone to I cannot say; I am in hopes that some of them may be alive yet, as they are so much like Grouse, that

people who are unacquainted with them would take no notice of them." He then says:—

"I now come to your last query, which is, if they ever bred? and if they did not succeed, the reasons assigned for their not doing so? I really confess that I cannot assign any satisfactory reason whatever, as I have no doubt that full-grown birds would live as well in Ireland as they do in Scotland, if they were only let alone. What I am most doubtful about is, whether they will breed as well; and the reason I am doubtful about this is, that when I was in Scotland, keeper with Lord Douglas, at Douglas Castle, where Black Game are very plentiful, I used, in hunting the dogs over the ground, to find all the young broods of Black Game, not among heath or moss ground, where young Grouse generally are, but on white or green ground, where sprit or rushes are plentiful, and where you will seldom find young Grouse. But when they get strong and able to do for themselves, they get into packs, often to the number of forty or fifty, and fly over the whole country, and take both to the woods and corn-fields. When at Douglas last, I was talking to Lord Douglas' keeper about what he thought the young birds fed on. He said that early in the season he had caught some young birds, intending to tame them and learn them to feed, so that I might be better able to get them safe over; but they all died in a day or two. He cut open some of their crops to see what they fed on, and could observe nothing but the seed of the sprit or rush. Now, from the number of black cattle that are kept on the mountains in the north of Ireland, there is scarcely any sprit or rushes allowed to grow that would be of any use either for cover or food. I have seldom seen Black Game sit when cattle go near them, and a crow flying over will make a score of them rise and fly away in the latter end of the season, when they are strong on the wing. With respect to the haunts and breeding-ground of young Black Game, I speak only from my own observations. I am not aware that they haunt the same kind of ground in other parts of the country; I merely wish to direct your attention to it. I know there are plenty in the Island of Arran, but do not know what sort of ground they frequent there. As I mentioned before, none of the hens have been seen since the beginning of the breeding-time; whether they began to hatch, and were killed by some vermin, or wandered away in search of a more suitable place for their purpose, is a question I cannot answer. Lord Courtown's keeper was at Douglas Castle shortly after I was, in November, 1839, and got away six brace to his Lordship's estates south of Dublin, but I have not heard how they succeeded."

A similar want of success has been attendant on birds brought from Scotland, and turned out at Tollemore Park, county of Down. In April, 1846, there was still a fine Gray Hen there, but no male bird.

The great difference which usually exists between the food of the young and adult birds of almost all species, will readily account for the fact here stated—as to adult birds

thriving and doing well, while no broods appear to have been produced; and we can easily imagine the absence of the sprits or rushes in the localities referred to, to have had considerable influence in the above-related negative results as to the Black Game breeding in Ireland. It would be well if those who have the opportunity of doing so, were to examine carefully the crops of young Black Game in all stages of their growth; and if this were well and carefully done, and properly recorded, there can be little doubt that we should either soon see the Black Cock introduced into Ireland, or the fact of the impossibility of adding such a desirable bird to the Irish Game List would be proved by the existence of some natural and insuperable bar. We can scarcely think that the somewhat peculiar climate of Ireland offers any absolute impediment to the increase of the Black Grouse; were this the case, we should hardly find it regularly breeding, as we do, in several of the mildest parts of England, such as the extreme south of Devon, where the climate assimilates, in many respects, to that of the Green Isle.

Mr. Thompson hints that Great Britain may be the extreme western range of this fine bird. Even if this were so naturally, we see no reason why the attempts to introduce it artificially should necessarily be unsuccessful; at any rate, until the experiment has been fully tried, by turning out the birds in districts where the natural productions are similar, botanically, to those of the locality from which the birds are brought, the question can hardly be said to be settled. As a matter of choice we should prefer introducing into an open country, birds from a similar situation, in preference to those that had been reared where wood was plentiful.

Over the continent the Black Grouse is very generally distributed. In the north of Europe it is found plentifully in Norway, Sweden, Denmark, Russia, and Siberia. It also occurs in more or less abundance in Lapland, Holland, Poland, Germany, France, Italy, and all through the timbered parts of the Alps.

As an article of food the Black Grouse is generally much admired, though certainly by no means equal to the Red Grouse. It is remarkable in having the greater and lesser pectoral muscles of different colours; the outside or greater one being very dark, while the lesser one, nearest the breast bone, is remarkably white, and is the favourite part with the epicure.

The habits of the Black Grouse, being less arboreal than those of the Capercaillie, lead it to select such parts of wild and subalpine country as are naturally covered with a thick brushwood of alder, birch, hazel, and willow, along with the rank and luxuriant herbage, such as fern, reeds, rushes, and coarse grass, which is commonly found in such situations. Such districts as the above are generally well supplied with marshy and boggy ground, which appears to have special attractions for the Black Grouse. If to these we add wild and sequestered woody glens, not uncommon in such untamed districts,

we shall be able to form a correct idea of the usual resorts of this fine bird. In some favourable localities, however, where considerable quantities of timber exist, the Black Cocks will often frequent them from August until the spring, and in these situations they are said always to roost on the ground, and not in the trees, though they perch readily, and live much on the young shoots of the trees.

In the very severe winter weather of the north of Europe, the Black Grouse, having fed plentifully on the food then attainable, such as the catkins of the birch, buries itself, more or less completely, like the Capercaillie, in the snow; and by thus economizing its natural heat, it is able to survive a cold that could not but prove fatal to it if exposed for any time to its full severity. It is probable that this expedient is much more frequently resorted to than is commonly supposed by all birds, whose habits lead them into such frozen localities.

The males associate together during the autumn and winter months in considerable flocks or packs, and do not separate until the early spring—in March or April. Being polygamous, these packs now break up, and each male bird chooses some particular station, such as an elevated open piece of ground, from which he endeavours to banish all others of his own sex. Having, by repeated battles, obtained the lordship of his territory, he commences at early daybreak, or evening twilight, to invite the attendance of the females. On these occasions he struts about in a pompous manner, trailing his wings, elevating and expanding his tail, which he occasionally bends to one side, inflating his neck, and, in fact, proceeding much in the way the Turkey Cock does under similar circumstances. During this proceeding he continues uttering his love-call, which is a peculiar humming, crowing, rolling note, accompanied by a sound, compared by Mr. Selby to the noise made in whetting a scythe. He is at this time in his most brilliant plumage, and the naked wattle over his eye assumes a brighter scarlet. In some well-preserved districts numerous cock birds may be heard at the same time uttering their love-song. On hearing it the females soon assemble on the appointed spot.

The following account of the habits of the Black Grouse in the breeding-season is from the pen of Mr. Archibald Hepburn, a most careful and accurate observer, and is particularly interesting, from its recording a deviation from the ordinary conduct of the cock birds, as detailed by other observers:—Mr. Hepburn says, “On the 12th. of April, 1843, when riding over the green hills which divide the head waters of the Teviot from those of the tributaries of the Esk, I rested for two hours at the inn of Moss-paul; there, on a sloping hill, I noticed a pack of Black Grouse, consisting of three males and eleven females, feeding within one hundred and fifty yards of the inn door, and fifty yards from the highway on which I stood. One of the former lowered his head, depressed the tips of his wings, erected and expanded his tail, now and then bending it on one side like a Turkey Cock, and, strutting about in pompous style before the females, uttered a loud,

rumbling, guttural, and at first generally querulous, and then rolling note, which in that quiet narrow glen was easily heard at the distance of a quarter of a mile. It would be difficult to syllable such a note; the snarling of a mastiff, omitting the nasal part of the performance, gives a pretty correct idea of the rolling notes. The proud bird was a haughty wooer, for aye as each female fled from his importunities, after pursuing her a short way, he paid his addresses to another. It is a curious fact that, although the amorous chase often brought him into close contact with the other two males, who remained silent and unconcerned spectators of his fooleries, 'not the slightest animosity was manifested by either party.' A stage coach dispersed the pack; two males and eight females flew across the glen; on alighting, one of the former recommenced his gestures and notes, and occasionally uttered a loud, harsh, hissing squeal or scream. By reason of his importunities, as well as to obtain food, the pack soon became scattered; so he was obliged at times to fly from group to group of coy females, scarcely ever intermitting his curious cry when on the ground. A man at the inn informed me that these notes and gestures usually commenced about the middle of March, and ceased in the course of eight or ten weeks. I observed their habits most attentively during the space of an hour and a half, noting down everything of interest, and although this account may differ from that given by other observers, it is too brief, and stands too much alone, to justify any one in contradicting their statements." It is difficult to reconcile the conduct of the two passive males, on this occasion, with their usually pugnacious disposition, as recorded by numerous other trustworthy observers; may it be that they were two young birds which had been well beaten and conquered by the other, probably an old and powerful bird? We have frequently, in the poultry-yard, seen a similar exhibition of subjection, by young cocks, in the presence of the lord of the dunghill.

From the time the females have deposited their proper number of eggs, which is usually in the month of May, and have commenced sitting, they are deserted by the cock birds, who again assemble in small parties, and seek the secluded and quiet thickets, among which they chiefly remain till they have completed their moult. They are, during this seclusion, particularly timid and shy. The female has thus the whole charge of hatching and bringing up the young birds. In their first plumage both sexes resemble the female, and they continue with her until the autumnal moult, when the young males join the old cocks, with whom they then remain till the following spring. The young cocks do not, however, all of them at once obtain their full adult plumage, but for some months some will retain a portion of their younger dress. The packs of male birds are sometimes very numerous, often amounting to from fifty to seventy birds. The females also in autumn are occasionally found in packs, but in much smaller numbers generally under twenty.

Mr. Daniel, in his "Rural Sports," gives the following description of the methods of shooting

and capturing the Black Game in Russia and Siberia. He says, "In Russia the shooting of the Black Grouse is conducted in the following way:—Huts full of loop-holes, like little forts, are built for this purpose in the woods frequented by these birds. Upon the trees, within shot of these huts, are placed artificial decoy-birds, commonly made of black cloth, with the marks of the natural fowl: as the Grouse assemble, the company fire through the openings, and so long as the sportsman is concealed, the report of the gun does not frighten away the birds; several of them may therefore be killed from the same tree. If by chance three or four are placed on branches one above the other, the sportsman has only to shoot the undermost bird first, and the others gradually upwards in succession; the uppermost bird is earnestly employed in looking down after his fellow-companion, and keeps chattering to it till he becomes the next victim.

During winter, in Siberia, they take these birds in the following manner:—A certain number of poles are laid horizontally on forked sticks, in the open forests of birch; small bundles of corn, by way of allurements, are tied on them, and, at a small distance, certain tall baskets, of a conic shape, are set, with the broadest part uppermost; just within the mouth of the basket is placed a small wheel, through which passes an axis, so nicely fixed as to admit it to play very readily, and on the least touch, either on one side or the other, to drop down, and again recover its situation. The Black Grouse are soon attracted by the corn on the horizontal poles, first alight upon them, and after a short repast, fly to the baskets, and attempt to settle on their tops, when the wheel drops sideways, and they fall headlong into the trap, which is sometimes found half full."

As might be expected from the nature of the localities chosen by the Black Grouse, the food on which it subsists is subject to considerable variety: thus in the summer it chiefly consists of the flowers of various plants, such as the autumnal hawkbit, (*Apargia autumnalis*;) of which it is said to be extremely fond; several species of *Ranunculus*, or buttercup; the various species of chickweed, (*Cerastium*;) the very numerous tribe of *Carices*, or sedges; common eye-bright, (*Euphrasia officinalis*;) various grasses; the leaves of some of the small willows; green corn occasionally; and towards the autumn the seeds of various plants; the berries of such alpine plants as the cranberry, (*Vaccinium oxycoccus*;) the whortleberry, (*V. myrtillus*;) the cowberry, (*V. vitis idæa*;) the crowberry, (*Empetrum nigrum*;) the red bearberry, (*Arbutus uva ursi*;) together with numerous insects. In the autumn all the berries just named, together with the dried flower heads of the scabious, (*Scabiosa succisa*;) some of the *Compositæ*; the seeds of the various grasses; oats; leaves of the scabious; the greater plantain, (*Plantago major*;) the flowers of various *Ranunculi*; the twigs of the ling, (*Calluna vulgaris*;) and of the cranberry, etc. In the winter months the "bill of fare" is more circumscribed, consisting chiefly of the twigs of ling, tops of herbaceous plants, young shoots of fir, catkins of birch and hazel, which, as well as the leaves of the ferns, communicate a peculiar flavour to

the flesh, leaves of turnip and rape, and what stray grain it can pick up on the stubbles.

Mr. Daniel mentions a curious fact in the economy of this bird, which is, that cherries and peas prove fatal to it. He merely mentions it as a fact, and does not say whether it is only an occasional and casual result, or invariably the case; we can hardly think the latter, but would rather be inclined to imagine that in some cases death may have resulted from the bird too greedily feeding on a new and agreeable food. The peas, especially if eaten plentifully and dry, might so enlarge, when damped in the crop, as to destroy life; for in no other respect could we imagine so harmless a vegetable as peas to be unwholesome. Cherries largely eaten are proverbially not very salubrious, and we can more readily conceive them to be injurious; but it cannot be a very common occurrence for wild cherries to be so abundant as to do serious injury to the Black Game.

In sporting language you are said to 'spring' or 'raise' Grouse; you find a 'brood' of Grouse; you kill a 'brace' or a 'leash' of Black Game; and when a number congregate together they are said to 'pack.'

The time fixed by law for shooting Black Game is, in England, from the first of September to the first of December; and in Scotland from the twentieth of August to the tenth of December. It is, however, very generally thought by sportsmen that it would be a great advantage, in every way, if a later date were fixed both for commencing this shooting, and also for its termination. It is probable that if the time for shooting Black Game were made the same as for shooting Pheasants, the change would be very advantageous; for the birds would have sufficient time to arrive at tolerable maturity, and the sportsman would have much greater satisfaction in bagging such birds than the wretched "pouts," which it is always a matter of regret to the true sportsman to see shot.

It is a somewhat curious circumstance that the Black Grouse alone of all our Game Birds, not even excepting the noble Capercaillie, should have been selected as worthy of the honour of being considered ROYAL GAME; and whenever warrants are issued to kill game in the New Forest, the Black Cock is always excepted, along with the Red and Fallow Deer.

It was at one time thought that where the Black Grouse increased the Red Grouse diminished, but it is now very generally considered that this effect does not take place; and indeed the habits of the birds are sufficiently different to render such a supposition improbable; thus we find the Black Grouse frequenting moist situations and woody covers, while the Red Grouse inhabits the more elevated and dry moors covered alone with heather; their breeding-places too are equally distinct in character. At the commencement of the shooting season the Black Cock will lie like a stone, but later on he becomes very wild, and extremely difficult to approach.

The situation chosen by the female Black Grouse for her nest is usually in some rough marshy place, well covered with long coarse grass and herbage; on the ground,

under one of these tufts or some low bushy shrub she places her nest, which is of the most simple construction, being composed of a few dried stems of grass. In this she deposits her eggs, varying in number from six to ten. They are in colour yellowish white, speckled and blotched with reddish brown, and measure two inches in length, by one inch and five lines in breadth. Soon after the young birds are produced, they are taken by the mother to more elevated regions, where, however, a rank and coarse herbage will generally be found, along with boggy moist ground, and but little heather.

According to the author of "The Moor and the Loch," the principal food of the young birds consists of the brown seeds of a short thick rush, near which the hen and young may always be found, and which is easily seen on the moor. This fact, as we have before hinted, should be borne in mind in any future attempts to introduce the Black Grouse into the sister country.

Various efforts have, at different times, been made to domesticate the Black Grouse, but as yet entirely without success, for in no instance have they ever bred while in a state of captivity; they, however, not only live, but individually do well in confinement. This inherent wildness, possessed alike by many of our wild animals and some of the human aboriginal inhabitants of foreign lands, is an exceedingly curious and interesting fact; the insuperable bar which it places to the complete domestication of numerous useful animals, on the one hand, and to the humanizing influences of civilization, on the other, are both inexplicable to us, but at the same time should lead us to acknowledge them as powerful proofs of the existence of certain laws, fixed by that Almighty Being who has said hitherto shalt thou go, and no farther.

Like others of the gallinaceous birds, it occasionally happens that a female Black Grouse will assume more or less the plumage of the male; we are not aware, however, that this curious change has ever gone to the extent that is not uncommon in the Pheasant; it is, we believe, usually limited to the presence of some black feathers among their ordinary plumage. The cause is probably the same as in the case of the Pheasant.

Sir William Jardine possesses "a female, or Gray Hen, shot by the late Sir Sidney Beckwith, entirely of a dull whitish gray, having the cross markings of a darker and browner shade." The rarity, however, of records of varieties of the Black Grouse, prove that these changes are by no means common; and it is a well-known fact that certain species of birds are seldom, if ever, found to vary from the normal standard, while others are subject to constant variations. Domestication has doubtless a great influence in educing variations in colour, and we accordingly find many domesticated birds losing almost entirely the characteristic colour of their wild prototypes; as for example the Tame Duck, the Goose, and many breeds of the Barn-door Fowl. The colours, if we may so call them, usually involved in these changes, are black and white and their mixtures, and perhaps, but more rarely, brown; we do not remember to have ever heard of any variety exhibiting

in its change any of the brighter colours, such as blue, green, yellow, or red; and yet why should they not occasionally be developed?

Like the Pheasant and the Capercaillie, the Black Grouse will now and then breed with other closely-allied birds; numerous hybrids between this bird and the Pheasant, varying a good deal, probably as the union was between a Black Cock and Hen Pheasant, or between a Cock Pheasant and a Gray Hen, are upon record. Of such hybrids Mr. Yarrell has enumerated thirteen examples; but others might probably without much difficulty be added. Birds have also been obtained in Norway which are believed to be hybrids between the Black Grouse and a species of Ptarmigan, but they are stated to be extremely rare; so also are those between it and the Capercaillie. It has also been known in Sweden to breed with the Barn-door Fowl; and, it is also suspected, with the Red Grouse.

The male Black Cock has the bill dusky black; irides, dark blue; over each eye is a semilunar patch of naked bright scarlet skin; under each eye there is a spot of dirty white colour. Head, neck, breast, back, and rump, all of a rich black, reflecting steel blue and purple; quills, brown; secondaries and wing coverts, tipped with white, and forming a white bar across the wing; the bastard wing has also a spot of white on it. Belly, wing coverts, and tail, pitch black; the tail, which consists of sixteen feathers, is deeply forked, the outside feathers curving outwardly; the end of the outside one seems as if cut off; under tail coverts, pure white. Legs and thighs, covered with dark brown, mottled with white feathers; legs, feathered to the toes, which have lateral fringes.

In the female or Gray Hen, as in the male, the bill is dusky black, and there is the same dusky white patch beneath the eye. The head and neck are ochre yellow, rayed with black; the upper parts are brownish orange, as a ground colour, barred and speckled with black; throat, breast, and belly, of a yellowish white or very pale orange, barred with black; the feathers on the wings and shoulders have the centre black, but the shaft is of a pale colour, which gets broader and paler towards the tip; greater wing coverts, tipped with white. The tail, consisting of eighteen feathers, is very slightly forked, of a reddish brown, spotted with black, the tip grayish white; under tail coverts, white, with a few bars of orange and black.

The young birds resemble the female in plumage until the autumnal moult.

The weight of an adult Black Cock is about four pounds; that of the female about two pounds.

The cock bird measures in length from one foot ten inches to two feet, while the female seldom exceeds eighteen inches.



RED GROUSE.

RED GROUSE.

RED GAME. MOOR COCK. GOR COCK.

<i>Lagopus Scoticus</i>,	.	.	.	.	.	VIEILLOT.
<i>Tetrao Scoticus</i>,	.	.	.	.	.	LATHAM.
<i>Tetras rouge</i>,	.	.	.	.	.	TEMMINCK.

Lagopus. *Lagos*—A hare. *Pous*—A foot. *Scoticus*—Of or belonging to Scotland.

WE are not, we believe, singular in regretting that this bird, an exclusive inhabitant of the British Isles, including, of course, Ireland, does not bear the title of *Britannicus* instead of *Scoticus*; the former would accurately describe its habitat, while the latter clearly perpetuates error; for, although Scotland certainly possesses it, so also do England, Wales, and Ireland, and each might with equal propriety claim the honour of having its name attached to this admirable and universally-esteemed Game Bird. *Scoticus*, however, appears to have been the originally-given specific name, and we would be the last to infringe on the rights of priority, and therefore place it as that by which the bird should be designated.

The Red Grouse, or, as it may be simply called, 'par excellence,' the Grouse, is very generally distributed over these Islands wherever suitable heathy districts prevail. It occurs as far south as the New Forest, in Hampshire, and in some parts of the west of England, in Staffordshire, Derbyshire, Lancashire, Yorkshire, Durham, Westmoreland, Cumberland, and Northumberland, in more or less plenty, and is very abundant in all the wild districts so prevalent among the Highlands of Scotland.

The mountainous districts of South Wales are supplied with it, but not in any great abundance.

In Ireland it is generally distributed over the wild tracts of heathy country prevalent in so many parts of the island. Although not in the abundance in which it is found in Scotland, it is, we believe, pretty fairly distributed, so that a reasonable day's sport may usually be calculated on wherever the birds are found.

The Moor Cock, as a bird for the table, is greatly superior to any of the other British Grouse, and indeed can hardly, we think, be equalled by any other Game Bird;

it is therefore somewhat singular that so delicious a bird should have been omitted at the celebrated feast given by Archbishop Neville; but neither it nor the Black Grouse appear in the list of the dainties which were served up at that sumptuous entertainment. As it is by no means an uncommon thing, particularly early in the season, for Grouse to be received, at a distance from the moors, in such a state of decomposition as to be quite unfit for culinary purposes, it will not be out of place here, we trust, to give one or two hints which, if acted on, might frequently prevent the disappointment both of the sender and the receiver of game. We will first give the following from Daniel's "Rural Sports," and then add one or two of our own which we have found most useful:—Mr. Daniel says, "The Grouse soon becomes putrid; they should, when shot, be immediately drawn very clean, and stuffed with heather: should the plumage be bit or torn by the dogs, it must be wiped as dry as possible, when put into the game-bag; and before packing to be forwarded to any distance, they should be again wiped, and laid within the moderate heat of a fire, to render them more perfectly dry. The best mode of packing is to put them in boxes, with partitions; a single bird, or, at most, a brace in each partition."

We believe that it is a decided improvement upon this plan to wrap the birds, after they are well dried, in a cloth wrung out in vinegar, the antiseptic properties of which are such as to preserve the birds perfectly fresh and sweet for a much longer period than they would continue without it. For ourselves, too, we should prefer our birds undrawn. The last recommendation, of keeping the birds from pressing upon each other, is very judicious, and in long journeys quite necessary, though the modern rapidity of transit by railway, to a great extent, obviates the necessity of such precautions. However, with every care, Grouse will sometimes be received in a state too far advanced even for those who like their game high. This condition is by no means irremediable, and for the comfort of those who wish to preserve the atmosphere of their dining-room in a wholesome and agreeable state, we will relate the steps we once recommended a lady friend of ours to take, who had received a hamper of Grouse in anything but a sweet condition. It so happened that she was expecting a large aldermanic party to dine at her house in about ten days after the receipt of the Grouse, and she was regretting that her friends had not delayed sending the basket for that period. We told her we would undertake that the birds should be in a fit state for her party if she would follow our directions. These were to have the birds plucked, and then well washed all over with strong vinegar, and while still wet with it, to be dusted over with powdered charcoal, and then hung up in a cool dry place by the legs, the birds to be well washed in milk before being roasted. This advice was carefully attended to, and, being afterwards present at the party, we had the satisfaction of hearing one of the aldermen, noted for his taste in such matters, declare that they were by far the best Grouse he had

tasted that season. Except for their being extremely tender, no one could possibly have said that they had been kept a day, so perfectly sweet were they. Both vinegar and charcoal are powerfully antiseptic, and the latter also has the property of deodorising any decaying substance. Birds hung up by the legs will keep, generally, at least a week longer than those hung up by the neck; and if, when birds are first shot, they are hung by the legs to a belt round the attendant keeper, they will be brought home in a much better condition for sending off than if crammed into a game-bag, unless indeed in wet weather, when probably the bag would be the least of two evils.

The situations chosen by the Red Grouse for its usual resorts, are those parts of moorland country which are entirely heathy in character, being those, indeed, which are intermediate in situation between the lofty, barren, and stony tracts frequented by the Ptarmigan, and the lower, swampy, and more wooded districts which we have described as the haunts of the Black Grouse. A supply of heath upon dry ground, however, appears to be the only absolute necessary, elevation above the sea-level not seeming to have much influence on their presence, as we find them in many districts in situations but slightly raised above the sea-shore. Mr. Thompson records that his "friend John Sinclair, Esq., of Belfast, who has been a regular Grouse-shooter for upwards of sixty years, has not only found Grouse occasionally in stubble and grass fields a mile distant from the mountain heath about Ballantrae, Ayrshire, but has sprung them from the heath growing in plantations of young trees about fifteen feet in height." This would seem to bear out the remark made by Sir W. Jardine that "the habits of the birds have considerably changed. By the approaches of cultivation to the higher districts, and by insulated patches of grain even in the middle of the wildest, the Grouse have learned to depend on the labours of the husbandman for their winter's food, and instead of seeking a more precarious subsistence, during the snow, of tender heath-tops or other mountain plants, they migrate to the lower grounds and enclosures, and before the grain is removed, find a plentiful harvest. Hundreds crowd the stooks in the upland corn fields, where the weather is uncertain, and the grain remains out even till "December's snows;" while in the lower countries they seek what has been left on the stubble or ploughed fields."

The Red Grouse is not naturally a wild bird, and in places where they were but little molested, they have allowed us to approach within a short distance of them without appearing frightened; if, however, they are much disturbed, they become extremely wary and shy, and require the utmost care and skill to circumvent them. The colour of the birds assimilating so closely to that of the heath among which they live, it is an easy matter to walk over a bird, if it is inclined to lie, as it frequently will, like a stone.

But although heath-clad hills are the usual and ordinary haunts of the Red Grouse, one or two have occasionally been met with in localities widely different in every respect.

Mr. Archibald Hepburn thus records one such occurrence:—"Familiar as I have been for many years past with their habits, I should have been the last to imagine that in any instance one of this species would voluntarily leave its native haunts, and take up its residence among drifting sand-hills, overgrown with bent grass, (*Agrostis*,) such as stretch along our coast from Whitberry Point to Scoughall Burn, about six miles as the Crow flies from the nearest heath-clad slope of the Lammermoors. It was here that a solitary female was seen in the winter of 1841; and in the following summer, Mr. Martine, gamekeeper to the Earl of Haddington, found her attended by a brood of young ones, which arrived at maturity, and frequented their native haunts for several months, till the whole were killed by poachers, or otherwise destroyed." Mr. Thompson says that he has twice in twenty years known single Grouse killed on a low and narrow bare strip of land called the Kinnegar, which stretches in a direction parallel to the nearest line of coast, a miniature promontory, into the bay of Belfast, about four miles from the town.

The flight of the Grouse is very rapid, particularly when they fly down wind, as they generally will do, contrary to the custom of most birds; the rapidity of their flight on such occasions is perfectly astonishing, and they have been known to escape from a Falcon, in full pursuit, by sheer swiftness of wing.

The Red Grouse is strictly monogamous, differing in this respect from the Capercaillie and Black Cock. The time of pairing varies with the mildness or severity of the season; should it prove mild and open, they will be found mated as early as January, and Selby says occasionally "even previous to that time." The female usually commences laying in March and April, and very rarely even in February, for Mr. Daniel says that "on the 5th. of March, 1794, the gamekeeper of Mr. Lister, (now Lord Ribblesdale,) of Gisborne Park, discovered on the manor of Twitten, near Pendle Hill, a brood of Red Grouse, seemingly about ten days old, and which could fly about as many yards at a time. This was an occurrence never known to have happened before so early in the year."

The note or crow of the Moor Game is well described by the following:—"Go, go, go, go, go back, go back;" and, according to Macgillivray, "The Celts, naturally imagining the Moor Cock to speak Gaelic, interpret it as signifying co, co, co, co, mo-chlaidh, mo-chlaidh; that is, who, who (goes there?) my sword, my sword." Besides this crow, it has an alarm-note which may be represented by the syllable 'kok' several times repeated. This must have been heard by every one who has disturbed Grouse.

The illegal destruction of Grouse has greatly increased of late years since the introduction of sheep and black cattle on hills formerly tenanted only by Grouse and Red Deer; for among the hinds, or people who attend upon these, too many are found able and willing to poach these birds. The following description of the method by which this is generally effected is from the pen of a "Veteran Sportsman:"—"When Grouse are taken by the

net, it is principally by persons who reside on the moors, or on the borders of them, such as farmers, and a description of persons to be found in Yorkshire and the north of England, who are called hinds, who attend the sheep and cattle of the larger farmer, and dwell at some distance on the moors. These persons, or at least such of them as are inclined to poaching, watch the motions of Grouse towards evening, when the birds are about to take up their abode for the night; and they are already aware of the direction in which they may expect the evening assemblage, from indubitable indications left by the birds on similar previous occasions, which their constant habit of traversing the ground has enabled them to notice; and it may be here observed, that Grouse, like Partridges, have their feeding and their sleeping ground, and if not much molested, will not quit either. Having watched the birds take up their position for the night, they prepare the net, and after they have become still for an hour or two, they approach, and endeavour to cover them. But netting Grouse is necessarily much more incomplete than the same operation performed upon Partridges; for although both Partridges and Grouse huddle themselves together precisely in the same manner on these occasions, yet the nature of the ground occupied by the latter, renders that effective working of the net, which is easily accomplished with Partridges, impossible when applied to Grouse. The situations where these birds are found, and where indeed they can alone exist, are covered with heath, for the most part, which prevents the close contact of the net with the ground, and therefore some of the brood generally escape. The net is dropped (not drawn) over the spot (which has been previously ascertained as nearly as possible) where the birds are resting; some of them flutter up against it on feeling or perceiving its approach, become entangled in the meshes, and are taken; others make their escape by running amongst the heath till they are out of reach."

In many parts of the north of England the miners are most determined poachers, but they are much fairer sportsmen than those above mentioned, using, almost invariably, the gun only. The same writer furnishes us with the following account of the proceedings of these people:—"These men commence operations prior to the 12th. of August; Grouse killed by them a week before the season, are buried in the earth, and putrefaction is thus procrastinated. I learned the circumstance from one of the fraternity. Some years since, I visited the extensive shooting ground of Stainmoor, Yorkshire; and, as on similar previous occasions, after ranging the moors till the intense heat of the day came on, exposed to the unsheltered action of a meridian sun, I seated myself by the side of a rivulet for the purpose of paying my respects to the brandy flask, and swallowing a sandwich. I had not been long in this situation when a man, accompanied by a single dog, approached, and took his seat at the distance of a few yards. There was nothing impudent or disrespectful in his manner, though the long, inferior-looking gun which he carried, and his appearance altogether, were sufficiently intelligible to me, having frequently been

placed in similar company prior to this period. After the usual interrogatories on such occasions, as I had not been remarkably successful, he offered me game at four shillings a brace, presenting several fine birds for my examination; one amongst the number was an old cock that had, I should suppose, escaped the deadly tube for four or five, or perhaps six, seasons; he was the largest Red Grouse that ever fell under my observation, and his weight could not have been much less than two pounds: an old male bird seldom reaches more than a pound and a half, and not very often that; the female is considerably less.

The man was, no doubt, an inveterate poacher; and notwithstanding the habitual cunning of his tribe, there was in his manner a great degree of unaffected and unqualified simplicity. Upon remarking to him that his birds appeared to have been killed several days, and consequently before the legal commencement of the shooting season, he unhesitatingly replied that the fine cock which I then held in my hand he had shot four days prior to the 12th. of August. As no kind of game fades so soon as Grouse, and as the weather during this period had been remarkable for heat, I inquired how he had contrived to keep his game so well, as it was still sweet; when he gave me the information related above, and added that the birds he then shewed me would keep three days longer. He farther remarked that his fraternity found it requisite to commence their season a week before the gentlemen's season, in order to be prepared with a supply of game for bad shots or unlucky sportsmen, and also for the stage-coaches which crossed Stainmoor on their way from the north to Liverpool, Manchester, and other large towns. It was at a period when percussion guns had not become general; the man, in the most respectful manner, asked me to allow him to look at my double detonators, and when he had satisfied his curiosity, he asked me to give him a little of my gunpowder for the purpose of priming his clumsy-looking flint lock, his own gunpowder being of that coarse kind used in blasting or blowing up the earth or rock in the process of excavation, and of which the lead-mining poachers no doubt rob their employers. Though coarse gunpowder answered the purpose for the charge in the barrel, yet it was not well calculated, it seems, for the purpose of priming. The sale of Grouse, he observed, had been very bad; he had still a considerable stock on hand; he lowered his price to tempt me to purchase, which I declined; and when, at length, he took his departure, in return, I suppose, for my generosity in supplying him abundantly with priming powder, he pressed me to accept a brace of his Grouse, which, it is almost unnecessary to remark, I declined."

Large numbers of Grouse are snared in the oat fields of the cottagers and small farmers who live near the moors. The Grouse are very fond of oats as a variety to their more ordinary fare, and frequent these fields in large numbers; and as the approach of a keeper is always easily seen at a considerable distance in such situations, the poacher has ample time to remove all traces of his nefarious deeds before he comes up.

"Grouse, generally speaking, become wild, and even unapproachable, by the beginning or

the middle of October, but as soon as a fall of snow happens to take place, so as to cover the ground, these fellows sally forth with a white shirt, or something of the sort, as their outer garment; the birds on these occasions may be seen at a considerable distance, and the poachers contrive to make their appearance resemble, as much as possible, that complexion which the snow has given to the moors and mountains; and being intimately acquainted with what, in place of a more expressive term, may be called the localities of these lofty regions, they are enabled to approach within gunshot, and thus supply the market, at a period when this description of game very easily obtains an increase of price. Severe weather induces the Grouse to pack; but as soon as a mild interval ensues, the males commence the call of courtship. The female will seldom answer the call for some days, or perhaps a week. Here again the poacher sets to work; many of these miners can imitate the voice of the female bird to such perfection, that the cock instantly answers, takes a short flight towards the place whence the invitation seemed to proceed, and calls again. The poacher, concealed by one of the gullies worn by the mountain torrent, or behind a convenient eminence, repeats the note of the female; the cock continues his approaches till within a dozen yards, when he commences a sort of fantastic manœuvre, flying or flirting up from the ground two or three yards, and down again; he does not continue long at this work ere he receives his quietus—in the act of endeavouring to exhibit himself to the concealed female, as he supposes, the poor bird loses his life.”

These poachers are very bold and fearless, and will follow their unlawful pursuit in spite of any force of gamekeepers that may be sent after them; we remember once reading of a large party of them besieging the Duke of Norfolk in one of his seats, and requesting (Quere, ‘More regali’) a day’s shooting over his moors, and saying that they would afterwards avoid them, and only visit those of other proprietors. The necessary license having been obtained, they, it is said, faithfully kept to their part of the agreement, and abstained from troubling his moors during the rest of the season. Probably the best method is for the keepers to endeavour to identify any visitors on the moors by means of the telescope, with which every keeper should be supplied, instead of a gun; he might then summon the intruder, without the risk of being shot for executing the duties of his office.

In addition to the poachers, the Grouse suffer much from their eggs and young becoming the prey of various rapacious birds, among which, as most destructive, the Carrion Crow, (*Corvus corone*,) stands pre-eminent. The Eagle, Peregrine Falcon, Hen Harrier, and Buzzard all commit great depredations on the Moor Game; and they are also preyed upon by wild cats, foxes, and the larger *Mustelinæ*. Many eggs are also destroyed by the dogs of those tending sheep, etc., on the moors; and whole broods are also very frequently annihilated by the very destructive system of burning the moors, to render them more suitable pasture grounds, and which is prevalent in many districts, particularly

in Ireland. This burning is used chiefly where sheep are pastured, and is frequently performed in spring, when the birds are sitting; but even if carried on in the autumn, the Grouse would lose both food and shelter, and their numbers must therefore be greatly diminished by this practice.

We come now to consider the food of the Red Grouse; this, from the nature of their haunts, is not of a very varied character, though it is probable that a careful examination of their crops might materially extend the following list:—The whortleberry, (*Vaccinium myrtillus*;) the cranberry, (*V. oxycoccus*;) the cowberry, (*V. vitis idæa*;) the hare-tail cotton-grass, (*Eriophorum vaginatum*;) the smooth heath bedstraw, (*Galium saxatile*;) various grasses; sedges or *Carices*; willows; the heath, (*Erica cinerea*;) the ling, (*Calluna vulgaris*;) the crowberry, (*Empetrum nigrum*;) the red bearberry, (*Arbutus uva ursi*;) oats in their season; etc. During the autumn the fruits of all these plants are eaten, while during the winter months they are obliged to be contented with their tender tops and small branches. As before mentioned, during this season they derive much of their food, in some districts, from the stubbles and oat fields. Mr. Thompson mentions that the mountains about Aberarder, which are covered with the reindeer lichen, (*Cladonia rangiferina*;) with only a sprinkling of heath, were well supplied with Grouse. Though he does not say so, it is probable they there derive much of their subsistence from this nutritious plant.

The sporting terms applied to the Red Grouse are the same as those given to the Black Game.

Grouse shooting commences, as is well known, on the 12th. of August in England and Scotland.

It is to be regretted that so early a day should have been fixed for this shooting, and were the moors always closed till September 1st., the sport would be far superior, and the birds more fit for the table. It is well known too that, early in the season, particularly if the weather be very hot, as it often is, the parent birds are the first to rise, and the old hen is very frequently killed, the young birds lying like stones; a known breeding bird is thus destroyed, and the chances for next season, 'pro tanto,' diminished. Of course a vast number of poults or young birds are also shot, very often when they can scarcely top the heather; there is no sport in this, and we can hardly imagine a true sportsman bagging such game; being shot too generally at very short distances, they are often almost blown to rags. All these evils would be remedied were the moors kept closed till the 1st. of September: in late seasons this delay is doubly necessary.

The following remarks, by a gentleman who, some years ago, used to write in a sporting magazine, under the designation of "Detonator," are so good that we commend them to the special attention of all those who frequent the moors, particularly for the first time:—"Grouse shooting differs materially from Partridge, or, as it is commonly termed by

sporting men, bird shooting. It will be vain to expect to enjoy Grouse shooting without previous training; the fatigue attendant upon this description of sport is inconceivable, and unless the amateur exercise himself and quadrupeds *à la Barclay* for some time previously to the "opening day," he will meet with disappointment. I would, with submission, recommend all enthusiasts to take a constitutional walk before breakfast, on hilly ground, as near the scene of action as possible; and at this time of writing (July) I would recommend any knight of the trigger who proposes visiting the moors next month, to betake himself to the neighbourhood of the hills, and there exercise himself and his dogs for at least three weeks. He will get himself and his dumb companions into wind, and both will be benefited by a knowledge of the surrounding country. Many men, calling themselves sportsmen, never see their dogs until a few hours before their services are required in the field. How, let me ask, can any reciprocity of feeling, or even understanding, exist between them? and without these it is next to impossible to command success.

A really good sportsman, and one who thoroughly understands his business, will make a friend and companion of his dog; a feeling of self-interest alone, (should no other exist,) ought to dictate the necessity of keeping up something like good feeling between man and dog. I speak from experience and observation. I remember some years ago, when on a particular moor in Yorkshire, falling in with a hero from this demoralized metropolis armed 'cap à pied,' with a dandy-cut jacket, a new double Manton, and a superlatively handsome setter. He happened unfortunately to be surrounded by sportsmen, and, as there was no intimacy existing between himself and his quadruped, he did little or no execution. The dog, not being familiarized to his master's voice, was always at fault; the whistle was equally useless; and as I happened to be nearest to the hero from St. James', his dog was repeatedly running to me whenever I fired, and called forth curses both loud and deep from his exasperated master, and yet I have no doubt the gentleman in question never conceived that he himself, by wilful negligence, had brought all the disasters on himself.

It is a mistaken notion that too many guns spoil the sport. I am prepared to prove that the more sportsmen there are, in moderation, on a given number of thousand acres, the better will be their chance of success, for this simple reason, that they drive the birds to one another. I need only mention, in corroboration of my assertion, that a friend of mine, an excellent sportsman, had permission to shoot over a private manor, not far from where I was enjoying my sport, in Yorkshire; there was no lack of birds, but they were wild, and, although provided with excellent dogs, he could not get within shot. After two blank days, or nearly so, he crossed the country to the position I had taken up. He was rather staggered at first, at the numerous fields, but found out, to his evident astonishment, that the numbers did good in furtherance of the sport, and that

they materially assisted each other. My friend and myself were, with only one exception, able to contend against the heat and fatigue, but how was this brought about? By the severe training we had imposed upon ourselves. Both our dogs and ourselves were in excellent working condition. I make it a point, when about to undertake a season of Grouse shooting, to walk for several hours a day, for at least a fortnight before I commence operations. I load my jacket pockets with dead weight, about ten pounds of shot in each; by this plan I become accustomed to the weight, and consequently do not feel it when they are crammed with birds.

Grouse shooters are, of course, aware that flags are planted on the ridges of the hills, or any eminences, to point out where the springs are, in order that both sportsmen and dogs may enjoy the necessary refreshment. Many were the unhappy objects we beheld on the day I am recounting, who were dead beat before twelve o'clock in the day, and the dogs were in an equally lamentable state with their owners; and even the few who had pluck enough to persevere after their temporary rest, did little more than frighten the birds; for the dogs, for the want of common foresight and precaution, not having been exercised, were fairly knocked up, and could not be prevailed upon to leave the heels of their negligent masters, in spite of all the d—s, and “hie up’s,” and “hie, away, Carlo’s,” bellowed vociferously by the owner: all the rating, kicking, and swearing were of no avail, and nothing was effected, save disturbing the birds. My St. James’ friend cut a lamentable figure, and was not a little jealous of the manifest advantage we maintained during that and every succeeding day. He had a smattering of Shakspeare, and ever and anon indulged in a quotation, and was more than once heard to “Curse the fate that gave him to the moor.” For Grouse shooting I prefer setters to pointers; they are more easily distinguished among the long heather, and are capable of enduring greater fatigue, by reason of their high courage.”

The following remarks on Grouse shooting, by Mr. St. John, are penned from a feeling, which it would be well were it more frequently exhibited by sportsmen, who, if they do not combine an admiration of the beauties of nature with their love of sporting, lose more than half the true enjoyment of a day on the moors:—“Although, like others, I am excessively fond of this sport, yet I care little for numbers slain; and when following it independently and alone, am not occupied solely by the anxiety of bagging so many brace. My usual plan when I set out is to fix on some burn, some cool and grassy spring, or some hill summit which commands a fine view, as the extremity of my day’s excursion. To this point then I walk, killing what birds come in my way, and after resting myself and dogs, I return by some other route. Undoubtedly the way to kill the greatest number of Grouse is to hunt one certain tract of ground closely and determinedly, searching every spot, as if you were looking for a lost needle, and not leaving a yard of heather untried. This is the most killing system, as every practised

Grouse shooter knows; but to me it is far less attractive than a good stretch across a range of valley and mountain, though attended with fewer shots. I am also far more pleased by seeing a brace of good dogs do their work well, and exhibiting all their fine instinct and skill, than in toiling after twice the number when hunted by a keeper, whose only plan of breaking the poor animals in is to thrash them until they are actually afraid to use half the wonderful intellect which nature has given them."

The following paraphrase, by an anonymous author, of James Hogg's well known lines, may not be inappropriately introduced here; it is named "The Grouse Shooter's Call:"—

"Come! where the heather bell,
Child of the Highland dell,
Breathes its coy fragrance o'er moorland and lea;
Gaily the fountain sheen
Leaps from the mountain green—
Come to our Highland home, blithesome and free!

See! through the gloaming
The young morn is coming,
Like a bridal veil round her the silver mist curl'd,
Deep as the ruby's rays,
Bright as the sapphire's blaze,
The banner of day in the East is unfurl'd.

The Red Grouse is scattering
Dews from his golden wing,
Gemm'd with the radiance that heralds the day;
Peace in our Highland vales,
Health in our mountain gales—
Who would not hie to the Moorlands away?

Far from the haunts of man
Mark the gray Ptarmigan,
Seek the lone Moor Cock, the pride of our dells:
Birds of the wilderness!
Here in their resting-place,
'Mid the brown heath where the mountain roe dwells.

Come then! the heather bloom
Woos with its wild perfume,
Fragrant and blithesome thy welcome shall be;
Gaily the fountain sheen
Leaps from the mountain green;
Come to our home of the moorland and lea!"

The nest of the Red Grouse is placed in a slight hollow under some tuft of ling or heath, which affords a little shelter and concealment; it is composed of a few straws, or withered grass and ling, with now and then a few of its own feathers, and is of the simplest kind. The eggs, which vary in number from eight to twelve, or even fifteen, are nearly covered with spots and blotches of umber brown, upon a yellowish or reddish

white ground; they measure in length one inch and three-quarters, by one inch and a quarter in breadth. The young run as soon as hatched. Incubation is performed by the female alone, but the cock bird is seldom far off, and when the young are hatched assists the female in bringing them up. During the autumn and winter they continue together, and do not separate until the pairing season. During the winter it is a frequent occurrence for several broods to join together, and form packs of forty or fifty birds; they are under such circumstances extremely wary and wild, and are with great difficulty obtained by the sportsman.

The Red Grouse is readily domesticated, and becomes very tame and familiar, and they have even bred when in confinement; Daniel mentions several instances of this, and Sir W. Jardine says he has "known a brood hatched under a kitchen dresser." It is seldom, however, that the young have come to maturity; nor indeed can we wonder at this; for, as we remarked when speaking of the Black Grouse, the food of adult and young birds is generally so different, that what is suitable for the one is often very injurious to the other. Before these kind of experiments can be frequently successful, much more must be known as to the food of the young poults from their earliest age; and this can only be accurately ascertained by careful examinations of the contents of their crops, when feeding in a wild state.

In some seasons, Sir William Jardine says, the young birds suffer greatly from tape-worm, which almost annihilates the whole of them in the districts where it prevails as an epidemic. The old birds also sometimes suffer severely from an epidemic, which appears to be connected with inflammation of the liver; with respect to this disease we quote the following from the pen of Mr. C. St. John:—He says that "on the 12th. of August on one occasion (1847) I found a few old Grouse lying dead, killed by the prevailing disease, which of late years has committed such havoc among these birds in certain districts; some which we killed were already attacked by it. Whenever this was the case, we invariably observed that the plumage of the bird was much altered, having a rusty red appearance, instead of the fine rich colour characteristic of the Grouse; the feathers, too, had an unnatural kind of dryness about them, which gave the bird a bleached, unhealthy look. In those Grouse which I opened myself, the presence of the disease was indicated by the liver being apparently rotten. Whatever is the cause of this mortality, it is a matter of some consequence to the proprietors of those districts where the Grouse shootings let for as high or a higher rent than the sheep pasturage; for it can scarcely be expected that Englishmen will continue paying at the rate they do for the right of shooting over tracts of ground where the Grouse are becoming almost extinct, as is the case in several places." As to the best method of checking this exterminating disease, which seems to be an epidemic inflammatory affection of the liver, Mr. St. John recommends destroying all the birds in the infected places.

"Instead of sparing the birds where they are attacked by this epidemic, I should be much more inclined to shoot down every Grouse in the infected parts of the hills; and I would continue to do this as long as any appearance of the disease remained. I would then give them a year or two of rest, according to the numbers and appearance of the birds. This seems to me the most likely way to check the destruction caused by what the keepers call the 'Grouse disease.'"

In any future epidemic of this kind, it would be well if the weather previously, and during its continuance, were carefully noted, as to wetness or dryness. Reasoning, 'à priori,' we should say that a wet summer would be likely to induce such an epidemic.

In tone of colouring the Red Grouse varies considerably; thus in some districts all the Grouse are dark, while in others they are light coloured. There is strong probability that these varieties are a wise provision of Providence, by which the birds assimilate their colours to those of the ground they frequent. Mr. W. Thompson was of this opinion, and mentions that "a friend who shot over the moor of Glenroy, Invernesshire, in 1844, observed that the Grouse differed much in their plumage, and were of three varieties, each keeping particularly to its own quarters. On the darkest and most heathy ground were the darkest birds, and the largest, weighing generally two pounds, and sometimes two pounds two ounces. On the rocky parts they were of a very much lighter brown; while on the stony and heathy ground combined, they were of an intermediate brown, mottled more or less with white."

These differences in tint can hardly be called varieties, in the usual meaning attached to the term, but those bred upon the moors of Blanchland, in the county of Durham, as mentioned by Mr. Selby, and which are of a cream-colour, or light gray, spotted more or less with dark brown and black, and occur in considerable numbers, are true varieties; and it is to be regretted that the breed is not allowed to increase more than seems to be the case. Sir W. Jardine possesses "a Grouse, shot on the moors of Galloway, where the ground colour is nearly yellowish white, and all the dark markings are represented by pale reddish brown: the quills are dirty white. In some instances the plumage takes an opposite shade, and is remarkable for its deep tint, and the almost entire absence of markings. The whole, or a part of the quills, are often found white." A cream-coloured Grouse was shot, says Mr. Archibald Jerdon, in Northumberland, in August, 1843; the markings were similar to those on the common Grouse; the ground colour being a cream or light brownish white, and the markings of the same colour, but darker. The quills and greater wing coverts were a bluish gray, as was also the abdomen. It was a young bird.

The adult male Red Grouse has the bill black; nostrils covered by small red and black feathers that hide half the bill; irides, hazel; over each eye is a naked semilunar patch of bright scarlet skin, fringed at the edge; there is a white spot on each side of

the base of the lower mandible. General ground colour of the plumage, rich sienna brown, shading on the belly into a nearly pure black; tips, paler, and with nearly black wavy lines across each feather. Tail, even, of sixteen feathers, the four centre ones with transverse black lines on chesnut brown ground, all the others black. Legs and feet, thickly covered to the claws with soft white feathers; claws, grayish white, broad, and strong.

The adult female has the general ground colour of a lighter shade, and the pale markings somewhat larger in size.

The young at first resemble the female, but are more ochreous in colour, and the plumage is more barred. Until they attain their full plumage, they often exhibit, to a greater or less extent, some white feathers on the under parts.

In weight the Grouse would appear to be subject to great variety; thus Mr. Thompson's friend, as above mentioned, says they will at Glenroy attain two pounds two ounces: this, we imagine, must be of very rare occurrence. Mr. James Blaydon met with one in 1848, near Pont-y-Pool, which weighed thirty ounces; and in the same year Mr. J. B. Fielding, of Alershole, near Todmorden, shot one weighing thirty-one ounces. The common weight, however, of these birds is from twenty to twenty-two ounces, though an addition of an ounce or two is not uncommon. We have seen one shot by C. Wilkinson, Esq., of Myton, Yorkshire, in September, 1851, which weighed full twenty-nine ounces.

The length of the Red Grouse is from fifteen to sixteen inches.



PTARMIGAN.

WHITE GROUSE.

<i>Lagopus vulgaris,</i>	.	.	.	.	FLEMING.
<i>Lagopus mutus,</i>	.	.	.	.	LEACH.
<i>Tetrao lagopus,</i>	.	.	.	.	LINNÆUS.
<i>Tetras Ptarmigan,</i>	.	.	.	.	TEMMINCK.

Lagopus. *Lagos*—A hare. *Pous*—A foot. *Vulgaris*—Common.

THE Ptarmigan, like many of our other birds, has gradually, as cultivation has encroached on its native haunts, become more rare, and in some districts has entirely disappeared; such seems to have been its fate in Cumberland and Westmoreland, where Pennant says it once existed; no traces are, however, now to be found of it in England, and the most southern part of Scotland where it is to be met with is the Grampian range of hills, or possibly Skiddaw. It becomes more and more plentiful as you go north, among the Highlands, and is also found in the Hebrides, and other Isles of Scotland. It is found in Islay, and on the Paps of Jura in considerable plenty.

In Wales it has long been extinct.

In Ireland it does not exist.

The Ptarmigan of both the European and American continents is generally believed to belong to this species, but it is probable that several distinct birds have been confounded under this designation, for many other species of Grouse change to a white plumage in the winter; but however this may be, the Ptarmigan must always excite a degree of interest, from the curious phenomenon of its changing in winter, in common with the ermine and alpine hare, from the gay dress of summer to the pure tint which affords it warmth and security in its bleak and alpine haunts when covered with their snowy mantle. So admirably adapted indeed are its two states of plumage to afford it security, that even the keen eye of the Eagle is very often unable to distinguish it among the surrounding objects which in colour it so closely resembles, unless it chance to excite attention by some unwary motion.

Although the colour of the Ptarmigan must be a very great protection to it from

birds of prey and other vermin, there is no doubt that it very frequently affords a meal to the lordly Eagle, as well as the Peregrine Falcon, and other less noble birds of prey. Its ranks are also thinned by the cunning fox, and some of the *Mustelinæ*, particularly during the breeding season, when the young are unable to save themselves by flight, and consequently fall an easy prey to their ruthless and sure-scented enemies.

As a bird for the table, it is much inferior to the Red Grouse, being drier and with less flavour; still it is by no means to be despised, and when Moor Game cannot be had, may fairly be called upon to act as its substitute.

The habits of the Ptarmigan lead it to prefer the barren and stony parts of the most elevated ground, instead of the heathy moors within its reach, and which are so essential to the existence of the Red Grouse; among these it lives, and as such districts seldom offer much inducement for man to invade them, they are often left almost unmolested. Still in some localities the shepherds, who nearly all have guns, nominally to shoot foxes, etc., commit considerable havoc among them. Some amount of protection should therefore be afforded to these pretty birds, or even in their Highland homes they may, as in the mountains of Wales, Cumberland, and Westmoreland, gradually become more rare, till at length they are extinct; to the regret of all naturalists, if not of sportsmen.

During the winter the Ptarmigans obtain their food by burrowing under the snow; they are thus concealed from observation, and also protected from the inclemency of the weather, which, however severe, but seldom induces them to seek the lower grounds: they are indeed birds of snow. Ptarmigans are by no means so shy and wary as the Red Grouse, but often exhibit such a degree of tameness, almost amounting to stupidity, as to allow themselves to be killed by a stick; when, however, they are much pursued, this tameness disappears, and they become more difficult of approach, though not to the extent exhibited by their congener. When alarmed by any unusual appearance, such as a man, dog, etc., they lie remarkably still, and so similar in colour are they to the ground on which they crouch, that it is an easy thing to overlook them entirely, even though they should be only a very few yards distant, unless your attention is particularly called to them by the peculiar cry of the species, which is in such cases uttered by a sentinel on a stone or rock. If you frighten him, he is off immediately, calling to the others, who join him one by one from their crouching concealment.

Their flight, which is rapid, is often of considerable length, frequently not terminating till they reach the opposite hill side. In autumn and winter the Ptarmigans collect in large packs, and, Macgillivray says, even so early as the end of July.

As a sporting bird, there seems to be a very general feeling among sportsmen, that it is infinitely inferior to the Red Grouse. Before having any chance of obtaining birds, you must ascend probably to the very top of the highest mountains, and even

then you may very easily be disappointed in obtaining the game you seek; and even if you do succeed to your heart's content, your game is very inferior in size and flavour to the Red Grouse, which you might have procured with half the labour. If, however, you seek the Ptarmigan, as a naturalist, you are without doubt amply rewarded for your trouble, by adding to your knowledge of the habits and instincts of these birds, as exhibited in the wild and rugged places which possess such powerful attractions for them, and which they never voluntarily leave.

Like the Red Grouse, the Ptarmigan is monogamous, and the packs break up early in the spring, when pairing takes place, and the couples distribute themselves in situations suitable for their purpose.

The note of the Ptarmigan is, according to Macgillivray, like the cry of a frog; but it has been compared to the harsh note of the Missel Thrush or Storm Cock.

The food of the Ptarmigan consists of nearly the same substances as that of the Red Grouse, such as the small and tender tops of the various alpine plants before named, berries, and probably insects. The gizzard always contains numerous small stones, which assist it in grinding up the food into a nutritious mass.

During the winter, while the "frost is on the plain," their mountain homes are necessarily exposed to a double portion of cold, and the small streams become frozen into solid ice; on these occasions the Ptarmigan uses snow instead of water to quench its thirst; and it is said that so fond are they of this article of diet, that even in summer time they endeavour to obtain it whenever practicable.

The terms used by sportsmen when speaking of Ptarmigan are the same as those applied to Grouse.

The time of shooting is also the same.

The following account of Ptarmigan shooting, by Mr. C. St. John, gives a good idea of the pleasures and dangers attending the pursuit of Ptarmigans when snow is on the ground. Accompanied by a shepherd who knew every inch of the ground they were going to try, Mr. St. John before sunrise leaves the hut where he had passed the night:—"The sun was not up as we crossed the river on the stepping-stones which the shepherd had placed for that purpose, but very soon the mountain tops were gilded by its rays, and before long it was shining brightly on our backs as we toiled up the steep hill side. My companion, who knew exactly which was the easiest line to take, led the way; deeply covered with snow as the ground was, I should without his guidance have found it impossible to make my way up to the heights to which we were bound. "I'm no just liking the look of the day either, Sir," was his remark, "but still I think it will hold up till near night; we should be in a bonny pass if it came on to drift while we were up yonder." "A bonny pass indeed!" was my inward ejaculation. However, depending on his skill in the weather, and not expecting myself that any change would

take place till nightfall, although an ominous-looking cloud concealed the upper part of the mountain, I went on with all confidence.

Our object was to reach a certain shoulder of the hill, not far from the summit, from which the snow had drifted when it first fell, leaving a tolerably-sized tract of bare stones, where we expected to find the Ptarmigans basking in the bright winter sun. It was certainly hard work, and we felt little of the cold, as we laboured up the steep hill. Perseverance meets with its reward; and we did at last reach the desired spot, and almost immediately found a considerable pack of Ptarmigans, of which we managed to kill four brace before they finally took their flight round a distant shoulder of the hill, where it was impossible to follow them. An Eagle dashed down at the flock of birds as they were just going out of our sight, but, as we saw him rise upwards again empty-handed, he must have missed his aim. By this time it was near mid-day, and the clouds were gathering on the mountain top, and gradually approaching us. We had taken little note of the weather during our pursuit of the birds, but it was now forced on our attention by a keen blast of wind which suddenly swept along the shoulder of the mountain, here and there lifting up the dry snow in clouds. "We must make our way homewards at once," said I. "Deed ay! it will no be a canny night," was the shepherd's answer. Just as we were leaving the bare stones, a brace of Ptarmigans rose, one of which I knocked down: the bird fell on a part of the snow which sloped downwards towards a nearly perpendicular cliff of great height: the slope of the snow was not very great, so I ran to secure the bird, which was fluttering towards the precipice: the shepherd was some little distance behind me, lighting his everlasting pipe; but when he saw me in pursuit of the Ptarmigan, he shouted at me to stop: not exactly understanding him, I still ran after the bird, when suddenly I found the snow giving way with me, and sliding 'en masse' toward the precipice. There was no time to hesitate, so, springing back with a power that only the emergency of the case could have given me, I struggled upwards again towards my companion. How I managed to escape I cannot tell, but in less time than it takes to write the words I had retraced my steps several yards, making use of my gun as a stick to keep myself from sliding back again towards the edge of the cliff. The shepherd was too much alarmed to move, but stood for a moment speechless; then recollecting himself, he rushed forward to help me, holding out his long gun for me to take hold of. For my own part I had no time to be afraid, and in a few moments was on 'terra firma,' while a vast mass of snow which I had set in motion rolled like an avalanche over the precipice, carrying with it the unfortunate Ptarmigan.

I cannot describe my sensations on seeing the danger which I had so narrowly escaped: however, no time was to be lost, and we descended the mountain at a far quicker rate than we had gone up it. The wind rose rapidly, moaning mournfully through the passes

of the mountain, and frequently carrying with it dense showers of snow. The thickest of these showers, however, fell above where we were, and the wind still came from behind us, though gradually veering round in a manner which plainly showed us that it would be right ahead before we reached home. Every moment brought us lower, and we went merrily on, though with certain anxious glances occasionally to windward. Nor was our alarm unfounded, for just as we turned an angle of the mountain, which brought us within view of the shepherd's house perched on the opposite hill side, with a good hour's walk and the river between us and it, we were met by a blast of wind and a shower of snow, half drifting and half falling from the clouds, which took away our breath, and nearly blew us both backwards, shutting out the view of everything ten yards from our faces.

We stopped and looked at each other. "This is geyan sharp," said the shepherd, "but we mustn't lose a moment's time, or we shall be smothered in the drift; so come on, Sir:" and on we went. Bad as it was, we did not dare to stop for its abating, and having fortunately seen the cottage for a moment, we knew that our course for the present lay straight down the mountain. After struggling on for some time, we came to a part of the ground which rather puzzled us, as instead of being a steep slope it was perfectly flat; a break, however, in the storm allowed us to see for a moment some of the birch trees on the opposite side of the river, which we judged were not far from our destination. The river itself we could not see, but the glimpse we had caught of the trees guided us for another start, and we went onwards as rapidly as we could, until the storm again closed around us, with such violence that we could scarcely stand upright against it. We began now at times to hear the river, and we made straight for the sound, knowing that it must be crossed before we could reach home, and hoping to recognise some bend or rock in it which would guide us on our way.

At last we came to the flat valley through which the stream ran, but here the drift was tremendous, and it was with the utmost difficulty that we got to the water's edge. When there we were fairly puzzled by the changed aspect of everything, but suddenly the evening became lighter, and the drifting snow was not quite so dense. We saw that we should soon be able to ascertain where we were, so we halted for a minute or two, stamping about to keep ourselves from freezing. My poor dog immediately crouched at our feet, and curling himself up laid down; in a few moments he was nearly covered with the snow: but the storm was evidently ceasing, at any rate for a short time, and very soon a small bit of blue sky appeared overhead, but in a moment it was again concealed by the flying shower. The next time, however, that the blue sky appeared, it was for a longer period, and the snow entirely ceased, allowing us to see our exact position; indeed we were very nearly opposite the house, and within half-a-mile of it. The river had to be crossed, and it was impossible to find the stepping-stones; but no

time was to be lost, as a fresh drift began to appear to windward; so in we went, and dashed through the stream, which was not much above knee-deep, excepting in certain spots, which we contrived to avoid. The poor dog was most unwilling at first to rise from his resting-place, but followed us well when once up. We soon made our way to the house, and got there just as another storm came on, which lasted till after dark, and through which in our tired state, we never could have made our way. Donald and the shepherd's family were in a state of great anxiety about us, knowing that there would have been no possible means of affording us assistance, had we been bewildered or wearied out upon the mountain. The shepherd himself was fairly knocked up, and could scarcely be prevailed upon to take either food or drink, or even to put off his frozen clothes, before flinging himself on his bed. For my own part I soon became as comfortable as possible, and slept as soundly and dreamlessly as such exercise only can make one do. I must candidly confess, however, that I made an inward vow against Ptarmigan shooting again upon snow-covered mountains."

The Ptarmigan is readily taken by snares, and a curious habit which it has, in common with many other birds, of running alongside of any little obstacle instead of leaping over it, has been taken advantage of to ensure its capture in some countries. In Lapland it is said that the inhabitants take them in large numbers, by making little hedges of birch boughs, with openings at intervals, in each of which is placed a snare. The birds come up to feed on the catkins of the birch, run along the hedge, attempt to go through the openings, and are taken in the snares.

"Their flesh is much esteemed," says Daniel, "by the Europeans at Hudson's Bay; they are as tame as chickens, especially in a mild day (in winter:) in their wildest state, by being driven about and fired at with powder, they grow so weary by those short flights, as very soon to be tame. If the hunters see the birds unexpectedly likely to take a long flight, they imitate the crying of a Hawk, which so greatly intimidates them, that they instantly settle. Nets, twenty feet square, fixed to four poles, and supported in front in a perpendicular direction with sticks, is the usual mode adopted to take them; a long line is made fast to these props, the end of which a person holds, who lies concealed at a distance: several people are then employed to drive the birds within reach of the net, which, when pulled down, often covers fifty or sixty. At this time so plentiful are they, that ten thousand are taken for the use of the settlement, from November to the end of April.

The time of pairing is, like the other Grouse, early in the spring, and incubation is mostly completed by the beginning or middle of June.

The nest is of the simplest kind, and hardly deserves the name. It consists merely of a slight depression in the ground, with a few scanty twigs or bits of grass and sedge. It is generally by no means easy to be found; for placed, as it often is, under

some stone, or plant of heath, it is commonly left by the female as soon as she observes any one approaching, which from the nature of the situation she can readily do; and you thus have but little clue to guide you to where she has deposited her eggs. The eggs, which vary in number from eight or ten to fourteen or fifteen, have a ground colour of yellowish or greenish white, slightly blotched and spotted with dark brown. They are one inch and seven or eight lines in length, by one inch and one or two lines in breadth.

Incubation is completed in twenty-one days, and is performed by the female alone, but the cock bird continues near his partner, perched on some rock or stone, and is said on such occasions to allow himself to be repeatedly pelted with stones.

Like the Red Grouse, the male Ptarmigan assists the female in leading about and protecting the young birds, and they continue together until the following spring, for they cannot be considered to have separated when several broods have united into one large pack.

As soon as the young leave the shell they are able to run about, and are described as being extremely clever and quick in hiding themselves when disturbed. Macgillivray says, "On the summit of one of the Harris mountains, I once happened to stroll into the midst of a covey of very young Ptarmigans, which instantly scattered, and in a few seconds disappeared among the stones, while the mother ran about within a few yards of me, manifesting the most intense anxiety, and pretending to be unable to fly. She succeeded so effectually in drawing my attention to herself, that when I at length began to search for the young, not one of them could be found, although the place was so bare that one might have supposed it impossible for them to escape detection."

The Ptarmigan is said not to submit to confinement for any length of time; and has never been known to breed, except in a state of nature.

The adult male in his winter dress has the bill brownish black; a band or streak past the eye, black; irides, yellow brown; over each eye is a semilunar patch of bright scarlet naked skin. Shafts of the quills and all the lateral tail feathers, black; the whole of the rest of the plumage is pure white. Claws, the same colour as the bill, but with the tips and edges horn-colour; toes, feathered to the claws.

The adult female in winter differs but slightly from the male. The black streak past the eye is wanting, but the bases of the feathers on that space are black; the superciliary naked red skin is also wanting.

Selby says, "In spring the plumage becomes varied on the upper and under parts with black and deep ochreous yellow, but the quills through all its changes remain white, and their shafts invariably black. Towards autumn the ochreous yellow gives place to a grayish white, and the black spots, which in the spring are large and distinct, become broken, and assume the appearance of zigzag lines and specks. These again, as

the season advances, give place to the pure immaculate plumage which distinguishes both sexes during winter."

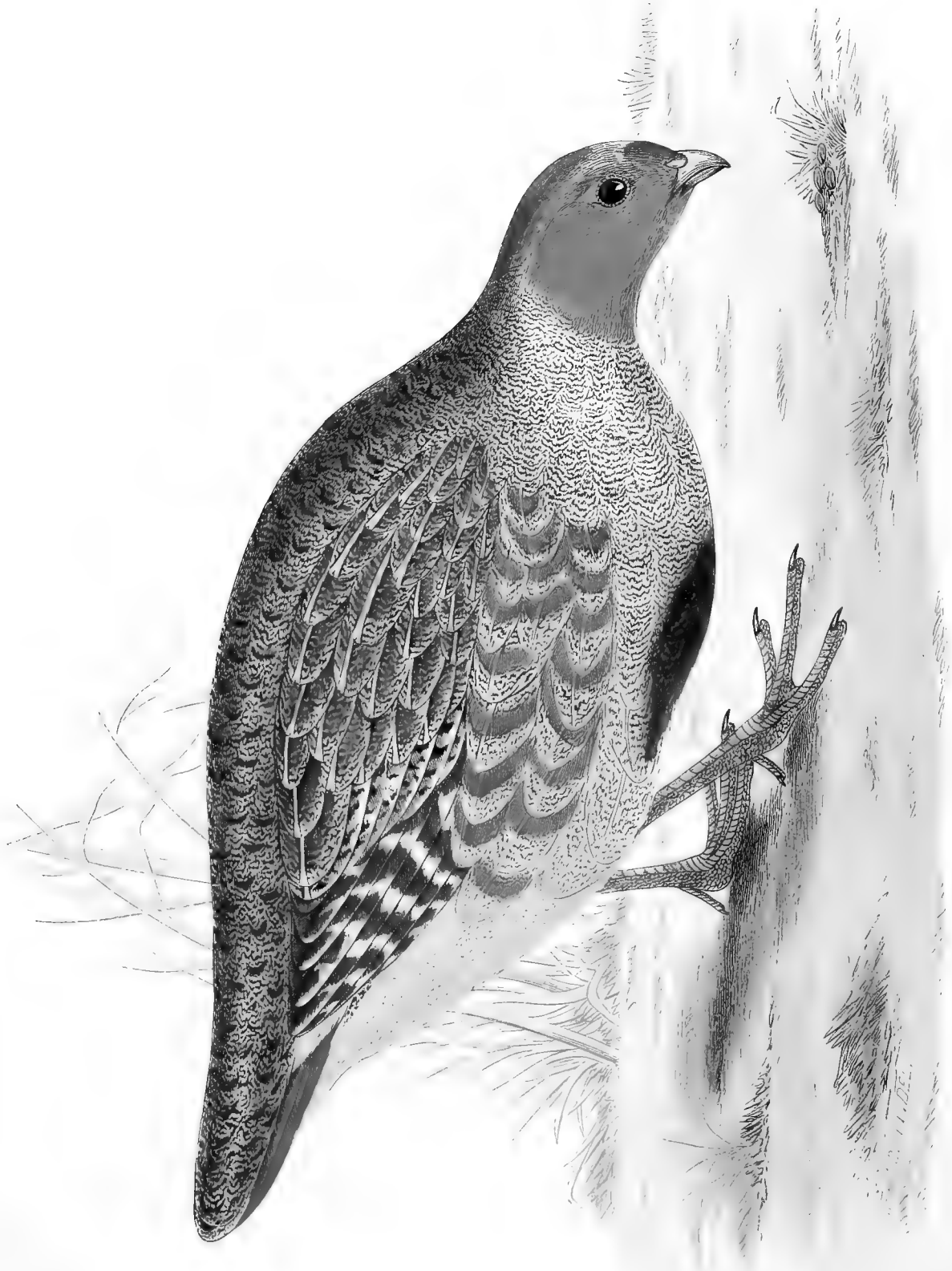
Those who may wish for a most minute and careful account of the changes which the plumage of the Ptarmigan undergoes in spring, summer, autumn, and winter, we refer to Macgillivray's elaborate work on British Birds, vol. i., page 188-197, where every change is most accurately described.

In the young the feathers are spotted and barred with yellow and dark brown. Wings, white; shafts of quills, dusky; tail, brown black; centre feathers barred with yellow and dark gray.

The weight of the Ptarmigan is about nineteen or twenty ounces.

In length the Ptarmigan will measure from fourteen inches to fifteen and a half, the males being rather the largest.

The *Lagopus rupestris*, or Rock Ptarmigan, is now generally considered to be only one state of this bird.



PARTRIDGE.

PARTRIDGE.

COMMON PARTRIDGE. GRAY PARTRIDGE.

<i>Perdix cinerea</i>,	.	.	.	.	LATHAM.
<i>Tetrao Perdix</i>,	.	.	.	.	LINNÆUS.
<i>Perdix grise</i>,	.	.	.	.	TEMMINCK.

Perdix—A Partridge. *Cinerea*—Ash-coloured, or gray.

PERHAPS scarcely any other Game Bird is better known in this country, or is on the whole more deserving of the esteem in which it is held, than the Partridge. Selecting, as it does by choice, the most highly cultivated parts of the country for its resort, it offers to the sportsman, almost at his own door, most agreeable shooting, without the extreme labour and separation from his family and friends which is the penalty paid by the Grouse shooter for his more exciting pleasures. It is an interesting fact in the history of this bird, that while the extension of cultivation has gradually diminished the numbers of some birds, and has entirely banished others from districts where formerly they were in abundance, the direct contrary effect has resulted in the case of the Partridge, which we find to increase most abundantly in those localities where the modern system of farming is carried to its greatest extent. Being an indigenous inhabitant of these Islands, the Partridge only requires fair play to increase and multiply to almost any desired extent.

In speaking of the distribution of this bird over the country, instead of specifying the various places where it is found, we shall only state that it occurs in more or less abundance wherever moderate protection is afforded to it, except on those wild and rude moors and wastes which we have described as the peculiar haunts of the Grouse; and yet we have the authority of Mr. St. John for the fact, that in Sutherland he has occasionally met with it in situations usually resorted to by Moor Game alone. Confirmatory of this, and also as adding somewhat to our knowledge of the economy of the bird, we quote the following from a letter to Mr. W. Thompson from Mr. George Jackson, keeper to Lord Bantry at Glengariff:—"In this very mountainous district (the country between Bantry Bay and the Bay of Kenmare, nearly the whole of which is the property of

Lord Bantry, or members of his family) I frequently find covies far distant from any cultivated land. Curiosity caused me to examine what they fed on, and I found in their stomachs some seeds of a coarse kind of grass indigenous to the place, some kind of green herbage, and a quantity of spiders that are numerous among the heath."

In Ireland this bird, although very generally distributed, appears to be usually found in much less abundance than in England, and, from some unexplained cause, seems to have greatly diminished in numbers of late years. Mr. Thompson, in his excellent "Natural History of Ireland," has entered pretty fully into the supposed causes of this decrease; but as yet nothing positive has been proved. Mr. Thompson has mentioned the following among other believed injurious influences, namely, the prevalence of the custom of pickling seed wheat in poisonous solutions, to prevent the ravages of wire-worms, etc. This wheat, when eaten by the birds, has frequently been known to cause their death. As this is a matter of great importance, not only in Ireland but also in England, we give the following as quoted by Mr. Thompson. The circumstances were mentioned in all the newspapers at the time, and will be fresh in the minds of most of our readers:—

"Attention was lately called to this matter in England.—Doctor Henry William Fuller, of St. George's Hospital, sent the following communication to "The Lancet:"—"For some months past, in certain parts of Hampshire, Partridges have been found dead in the fields, presenting a very remarkable appearance. Instead of lying prostrate on their sides, as is usually the case with dead birds, they have been found sitting with their heads erect, and their eyes open, presenting all the semblance of life. This peculiarity, which for some time had attracted considerable attention among sportsmen in the neighbourhood, led to no practical result until about ten days ago, when a covey of ten birds having been found nestled together in this condition, two of the birds, together with the seeds taken from the crops of the remaining eight, were sent up to London for examination.' By analysis, Dr. Fuller discovered considerable quantities of arsenic in the viscera of the birds; this was traced to the seed corn in their crops. Inquiry established that 'in Hampshire, Lincolnshire, and many other parts of the country, the farmers are now in the habit of steeping their wheat in a strong solution of arsenic, previous to sowing it, with the view of preventing the ravages of the wire-worm on the seed, and of the smut on the plant when grown; that this process is found to be eminently successful, and is, therefore, daily becoming more and more generally adopted; that even now many hundred-weights of arsenic are yearly sold to agriculturists for this express purpose; that although the seed is poisonous when sown, its fruit is in no degree affected by the poison; that wherever this plan has been extensively carried out, Pheasants and Partridges have been poisoned by eating the seed, and the Partridges have been almost invariably found sitting in the position I have already described; and,

lastly, that the men employed in sowing the poisonous seed not unfrequently present the earlier symptoms which occur in the milder cases of poisoning by arsenic.'

The question was then suggested, 'might not the flesh of birds so poisoned prove injurious when eaten?' Dr. Fuller cut off the breast of a bird, and gave it to a fine healthy cat; 'she eat it with avidity; but in about half-an-hour she began to vomit, and vomited almost incessantly for nearly twelve hours, during the whole of which time she evidently suffered excessive pain. After this, nothing would induce her to eat any more Partridge. I kept her without food for twenty-four hours, but in vain: she resolutely refused to touch an atom more of the bird. This being the case, I gave her some beef and milk, which she eagerly swallowed, proving, beyond doubt, that her instinct, and not her want of appetite, induced her to forego the dainty meal which had just been offered to her.' Dr. Fuller also found, in every part of the flesh of the other bird, strong traces of arsenic; the bird could not have been eaten by a man without very serious consequences. 'It is notorious,' says Dr. Fuller, 'that many of the dealers in game are supplied through the agency of poachers and others, who have a direct pecuniary interest in supplying them with the largest possible number of birds. It is certain, moreover, that if men of this sort were to find a covey of Partridges in a field, dead, but fresh and in good condition, they would not hesitate to send them, with the remainder of their booty, to the poulterer, who would, as certainly, without suspicion, sell them to his customers.' The conclusions are, that the practice of steeping seed in arsenical solutions may become matter for restrictive legislative interference, both on sanitary and medico-legal grounds." Copied from the "Northern Whig," December 19th., 1848.

The facts here detailed are of great importance, not alone to the sportsman, but also to all who eat bought Partridges at the season when wheat is sown. We do not, however, remember to have heard of any such destruction of birds since that time, and possibly arsenic may be now less used by farmers than it was at that time.

In this country Partridges are stationary, or at least are generally considered to be so, but in some countries they migrate regularly: in Egypt this is said to be the case. In Russia, they are said by Mr. Daniel to become white in the winter, like the Ptarmigan. This he attributes to their inability to migrate to the south, owing to the mountains in that direction being covered with snow earlier than the warm and sheltered valleys more to the north. In several northern countries they are said to burrow in the snow during the winter, for warmth, like the Black Grouse and the Capercaillie.

Mr. J. W. Hulke, of Deal, makes the following statement, which would seem confirmatory of the idea of migration even in this country:—He says, "On the 29th. of November, 1848, some men in a fishing-boat off this place saw a covey of Partridges coming toward them, as if from France: one, more exhausted than the rest, fell in the boat; the rest reached the shore in safety."

Partridges are strictly monogamous: when pairing has once taken place, it is for life.

The flesh of the Partridge is delicately flavoured, and although you find most other Game Birds objected to by some individuals, it is rare to see any one refuse to partake of this excellent bird; indeed the general good qualities of the Partridge, as a bird for the table, are almost proverbial, and gave rise to the old couplet,

"If the Partridge had the Woodcock's thigh,
'T would be the best bird that e'er did fly."

The habits of the Partridge lead it to frequent the more open cultivated parts of the country; it is especially fond of corn-fields while the plant is growing, for there it has ample shelter; and after the corn is cut it picks up a good deal of its food in the stubbles, thereby rendering the farmer good service. The modern practice of mowing the wheat leaves a much shorter stubble, and consequently less cover for the birds. Wheat stubbles are preferred by them to barley stubbles; though these latter are by no means despised. The colour of the Partridge assimilating so closely as it does to that of a stubble-field, they readily secrete themselves, even in large covies, in the furrows, and behind clods. During the time of harvest, when the corn-fields are full of men and horses, they resort to the neighbouring fields, returning to feed in the evening, and also in the early morning, to the corn-fields. In the winter, when the stubbles are ploughed up, they betake themselves more to the rough meadows, where clumps of grass and mole-hills exist. Potato-fields and turnips are also very favourite resorts, and they may very frequently be found in them when not feeding in the stubbles. They will even be found sometimes in copses where there is underwood of brambles, fern, and coarse grass. Unless greatly disturbed, covies will keep pretty nearly to the same localities, whether for feeding or resting, and hiding.

The Partridge never perches on trees, being essentially a ground bird. It runs with great velocity; but when suddenly alarmed, it usually either squats very close, or else flies off at once. Its flight is tolerably quick, and must be familiar to most people. After rising to a moderate height, which it does in an oblique, and not in a perpendicular direction, it at once makes off in a straight course, quickly flapping its wings, which produces a sound well known to every sportsman, and which may be compared to the word 'whirr,' with the 'r' indefinitely prolonged, as whirr-r-r-r-r-r-r. During its flight, it will, occasionally, and particularly towards its termination, cease flapping its wings, and sail on with steady pinions for some distance, ending at last in a sidelong manner.

During the winter months Partridges will sometimes, especially in wild districts, pack like Grouse. We remember while shooting in December, 1841, at Hatfield, in Lincolnshire, seeing a pack of about forty: they were extremely wild and wary. It was said

not to be an uncommon occurrence in that district, though, at that time, we were unaware that Partridges ever congregated in winter in greater numbers than an ordinary covey, or double covey, which is sometimes found where two pairs have nested close together, and the young birds have got mingled, and remained with one pair. Packing, however, is rare in most districts, particularly where small enclosures prevail.

The Partridge is very fond of basking and sunning itself during the middle of the day in warm and sheltered situations, such as on the sunny side of a hedge bank; and like other gallinaceous birds, it frequently dusts itself, as we see Sparrows do in the dry and dusty roads.

After leaving the feeding-ground at dusk for their roosting-places, which are very frequently grass fields, the covey first separates, and runs over a considerable space of ground, as if to ascertain that all is safe and quiet; the old cock may be heard as if directing these movements, and when the ground has been sufficiently examined, he calls them to him, and they pass the night all close together, arranged in a circle, with their heads to the outside.

Mr. Thompson mentions a very curious circumstance with respect to the Partridge, which it is difficult to account for. He says, "There is a singular difference in habit between the Partridge of the north of Ireland and that of the opposite portion of Scotland, as is well known to sportsmen who have shot in both countries: I have myself remarked it with some interest. An Irish covey generally springs without uttering a call; but the Scotch covey shrieks with all its might when sprung. The Scotch birds too, even where very little molested, more knowingly take care of themselves than the Irish: their watchfulness is extraordinary. Their sense of hearing, as well as sight, must be remarkably acute. One day in the month of October, an experienced sportsman and myself sprang either twenty-four or twenty-six covies (nearly all double, or containing about two dozen of birds) in the neighbourhood of Ballantrae, when they all not only forbade a near approach, but, though we advanced as silently as possible, never admitted us into the same field with them. I have known Partridges, that when sprung there called loudly like old cock birds, prove, on being shot, young birds of the year."

Their call note on these occasions has been likened by Meyer to the words 'chisick, chisick.'

The Partridge is strictly monogamous, and when pairing has once taken place, it is truly "to love and to cherish, till death do us part."

Partridges, when placed under certain unusual circumstances, appear sometimes to lose entirely their presence of mind, if one may so term their attempts at self-preservation; in illustration of this we quote the following, as recorded in "The Naturalist" by John Williamson, Esq., Jun., of Emmanuel College, Cambridge:—"At the last Newmarket Houghton meeting, on Friday, the 29th. of October, (1852,) and during the racing, a covey of seven Partridges flew across the Heath to the poles near the betting-stand.

When they found they could not alight in consequence of the number of carriages and spectators, they continued their course, and alighted within two hundred yards of the stand, and on the bare course. One of the birds, separating from the rest, wheeled back over the heads of the mob, and by one of them was ultimately caught. Encouraged by this strange capture, many ran to the spot where the remainder had been marked, and after a series of running chases, the whole number were secured. Only one bird attempted a flight, but, alarmed at its pursuers, it dropped after rising about two yards, and in this manner the whole covey were secured."

Mr. Daniel mentions a still more singular fact:—"In Blickling Park, Norfolk, during the races there, at the very height of the sport, a covey of Partridges sprung up, and were flying across the ground, when, overcome with alarm at the noise and bustle of the scene, they fell lifeless among the throng, and were picked up by some of the spectators."

Another equally curious circumstance is also related by him:—"A covey of sixteen Partridges were disturbed by some men at plough, and directed their flight across the cliff to the sea, over which they continued their course about three hundred yards; when, as if intimidated or affected by the element, the whole were observed to drop into the water: twelve of them were soon after floated to shore by the tide, and picked up by a boy, who carried them to East-Bourne, where he disposed of his birds at ninepence each!"

That the Partridge may be tamed and will become extremely familiar has often been proved, but we never remember reading a more interesting account than the following by Arthur Hussey, Esq., of Rottingdean; we extract it from the "Zoologist." He says "I was not myself acquainted with the bird, but heard of it, I think during its life, from very intimate friends of its mistress, whose brief notice below, of its habits and peculiarities, mentions, I have reason to believe, but a portion only of those amusing traits by which it was distinguished.—'On the 5th. of July, 1839, I received a small hamper, containing a parcel of cotton wool, in the midst of which was a young Partridge, about a day old. The little wild thing could not be induced to eat, so I was obliged to feed it with boiled rice. I never expected to bring it up, having always heard that to handle a Partridge was a sure way to destroy it; but there is no rule without an exception, and this little creature was hardly ever out of my hands. It soon became quite tame, and whenever I put my hands together before it, it would creep in, and go to sleep very well contented. Warmth being indispensable, I used to pin it up in a fleecy-hosiery for the night, and in the morning fed it quite early, leaving it to sleep again.

Rice, bread, and ants' eggs were its food, upon which it thrived. It soon showed it liked to be always with me, and was perfectly happy in my lap; or when I have been painting, it would sit on my left arm, dressing itself, or sleeping in entire security. When it outgrew the flannel, and I could no longer have it pinned up, I used to take it into my mother's room, and if it could lie on her gown at her feet it was

contented, but was always on the watch for my coming back, and on seeing me, would jump up, and run to meet me. It was now so tame and pleased with being fondled as to excite much astonishment. My mother soon became very fond of it, and by degrees it was more with her than with me. Its cage was never inhabited; it would never sleep in confinement, therefore was awake, and quite alive all the evening, being either in the lap, or on the sofa.

When he had changed his feathers, and attained his full plumage, he refused to be handled, but his habits were just as sociable as before. His knowledge of every one was most extraordinary; his likings and dislikings were very strong; and he was so curious and observant, that no piece of furniture could be removed without his finding it out, and if the carpet was not smooth, he would set to work instantly to render it so, by scratching and pecking. He was very fond of gay colours, and no new gown or cap could be put on without catching his attention. He never offered to go up stairs or down, and very rarely used his wings; on being gently chastised when he did fly, he would run and hide himself like a child, as if he knew he had done wrong.

A box of earth was given him to rub in, which he thoroughly enjoyed. His feathers were always glossy, and in the most perfect order, which I attribute to his always having plenty of green food, such as grass and clover cut small. In the winter he liked wheat, but rarely touched it in the summer; was very fond of sugar and cake; drank very little water, and liked his food dry. He never forgot any one he had made acquaintance with, and the return of any of the family after many months absence, caused him so much joy and excitement, that I have been compelled to shut him up. He would distinguish the voices, even before they got out of the carriage. His partiality for my mother was very great, and if she was asleep, nothing would tempt him to quit her: but he never liked her to be in the drawing-room. In the evening he always came into the drawing-room, and remained till we retired. He slept at my bed-side, and never disturbed me, nor got up himself till I was called; and then he had a particular call if he fancied I was gone to sleep again. Once from being frightened, he flew out of the window, and being recovered after much trouble, (it was in a town,) he never again offered to get out. After this we had nets at the windows, and the net being one day left down in my room, by running up to my mother, and then into my room, he attracted her notice, and she followed him, he standing before the window, and when the net was replaced, showing himself satisfied. Unlike most pets, he died a natural death on the 1st. of January, 1843.’”

Another instance of this kind is related by Daniel, who says, “Amongst the very few instances of the Partridge remaining tame, was that of one which had been reared at the Rev. Mr. Bird’s: this, long after its full growth, attended the parlour at breakfast and other times, received food from any hand that would condescend to give it, stretched itself

before, and seemed much to enjoy the warmth of the fire, and at length fell a victim to the decided foe of all favourite birds, a cat: his dogs were too generous to molest it."

These, however, are but rare cases, and more commonly the home-reared Partridge, on acquiring maturity, gradually also acquires its natural wildness, and seeks the more congenial atmosphere of the fields.

That the Partridge will sometimes, under the influence of sudden surprise feign death would appear from the following incident, related by Mr. J. J. Briggs, of Melbourne, Derbyshire:—"February 18th, 1844: I was riding along a field, and came suddenly upon a Partridge, it did not rise with a whirring noise, and wing its way out of danger, but ran a few feet upon the turf, which was very bare, and squatted down suddenly, lying as close as a hare on her seat: its head touched the grass, and its neck was stretched out, as if it were a dead bird. I rode up to it quite close, but it moved not a feather, and I could scarcely make it escape although I cracked my whip: it was not disabled, for when it did rise it flew strong and well, and my impression was that it was feigning to be a dead bird."

The following extraordinary instance of courage in the Partridge, or whatever it may be called, is recorded by Aubrey as having been mentioned by Charles the First. He says that when he was a Freshman at Oxford in 1642, he often went to see Charles the First, who then resided at the university, at supper: on one of these occasions he heard him say, "That as he was hawking in Scotland, he rode into the Quarry, and found the covey of Partridges falling upon the Hawk;" and he adds that the Monarch said, "I will swear upon the Book that it is true."

Partridges are taken by poachers very readily, and in wholesale numbers, by means of a kind of drag net, which, however, does not drag on the ground, but is carried by four men, one at each corner, just enough off the ground to escape the bushes placed on the grass fields to embarrass the poacher; several bullets are attached to the net at different parts by cords, just long enough to allow them to touch the ground. The bullets are sure to disturb the birds, and as soon as the poachers hear their fluttering they instantly drop the net, and thus frequently capture the whole covey. Poachers, however, are cunning fellows, and the following ingenious improvement upon this, the ordinary method, is mentioned by Meyer:—"For taking of Partridges, a singular method has been adopted by some poachers, namely, to provide a setting dog, upon the head of which they fix a lantern, for the purpose of his ranging the field at night: on his stopping, the poachers know where the Partridges lie, and draw the net up to him accordingly. The gamekeepers of the Earl of Carlisle, some time since (now about twenty years ago) being on their nightly perambulations, were not a little astonished and alarmed at seeing a light traversing the field in a very singular manner; they prepared their guns accordingly, and in a short time the light made a sudden stop, when three or four men, whom they had not

descried, making their appearance, they were secured in the act of drawing a large net up to the light upon the head of the setter, as above mentioned."

Partridges are usually poached by some such method as above mentioned, the gun is seldom or never used except by the sporting poacher; a very different character from the ordinary poacher, for he follows the game from the love of sporting, and not merely for the money value of the birds.

In addition to the poacher, the poor Partridge has other, what may be called, natural enemies, by which it suffers much, particularly in the young state. Among these may be named the Carrion Crow; the Stoat or Ermine; the Fox; Hawks of various kinds; and lastly, the Common or Ringed Snake, (*Natrix torquata*,) which is much more frequently guilty of destroying young Partridges, than is commonly supposed. It is probable also that the Adder or Viper, (*Pelias Berus*,) is sometimes guilty of the same crime; if this be so, the retributive justice which, on one occasion at least, overtook the offender, as related farther on, would seem to be singularly appropriate.

The food of the Partridge varies at different seasons of the year; thus we find it in winter, spring, and summer feeding chiefly on blades and seeds of grass; seeds of various species of Polygonum, and many other weeds; and very largely of insects of all kinds, and in all stages of development; among others it seeks diligently for the various kinds of wire-worms, so destructive to the growing crops; also for the whole of the aphides; for spiders; for ants, and their eggs; for slugs; and in fact for every insect that frequents its haunts; thereby doing an incalculable amount of good to the farmer, who, for his own sake, should do all in his power to protect and encourage this most useful bird.

During the autumn they derive a portion of their nutriment from the corn fields: but we believe they never pull growing corn: the amount of corn consumed by them before the crop is carried off the ground can be but trifling, and any that they may pick up after that from the stubbles, must be looked upon as entailing, not only no loss, but a positive benefit on the agriculturist; for all corn left to vegetate, and grow up among any other crops, can only be looked upon as an injurious weed by every good farmer. During this period also, they destroy large numbers of insects, which are generally then very abundant. The young birds subsist almost wholly upon insect food, and take but a very small portion of corn. Along with its vegetable food, like the rest of the Gallinacæ, the Partridge always swallows a number of small hard stones, seldom exceeding a No. 2 shot in size; these assist the gizzard in grinding up the food, and preparing it for assimilation.

It is stated by Mr. Yarrell, "that on some heathy districts in Surrey, as the Hurtwood and Bagshot Heaths, the Partridges seldom frequent the corn lands, but subsist on heath and hurtle-berries. These birds are not so white in the flesh when dressed as others, and have some of the flavour of the Grouse."

An instance is on record by Mr. Daniel, of a Partridge having been shot near Newbury in October, 1807, which on being opened was found to have swallowed a Viper, (*Pelias Berus*,) thirteen inches long.

One family of Partridges is called by sportsmen a covey. You spring Partridges when you put them up: you shoot a brace or a brace and a half of birds. The foot marks of the Partridge are called its rode. Their sleeping is called jucking, or jugging.

Partridge shooting is fixed by law to commence on the 1st. of September, but, as with other game, it would be much better if the young birds were allowed a fortnight longer, as indeed they are on many manors with very manifest advantage, for the crops are then more generally off the ground, and the birds stronger on the wing.

The following humorous lines appeared some years ago under the signature of H. W. C. Whether they procured him the invitations he wished for does not appear; but we certainly think he deserved some good shooting for his wit; and he probably would have been an agreeable addition to any sporting party.

TO SPORTSMEN.

I've bought a gun,—a powder flask—
And laid out all my pelf!
But selfish souls won't shoot themselves,
Nor let me shoot MYSELF!

'Tis true some friend might give a day,
To tranquilize my nerves;
But save some dainty pots of jam,
I have no "CHOICE PRESERVES!"

I seek the sport but now and then—
I'm none of your eneroachers,—
Altho' my gun is one of "Egg's,"
I ne'er encourage "POACHERS!"

I could not slaughter every hare,
And yet my maxim's this:—
"That married men should always hit—
They have no right to MISS!"

I'd care not if from lord or duke
The invitation came—
From "High—Low—Jack"—or any one,
So I could get the "GAME!"

Well! here's my hint. I'm quite prepared
To join a sportsman's banners;
So, Sirs, you'll quickly ask me down—
If you have any MANNERS!

The dogs used by sportsmen in the pursuit of the Partridge, are either pointers or

setters. Some prefer one kind, some the other. Setters are generally considered to have a finer scent than pointers; and to be capable of enduring more fatigue when they have access to plenty of water. But whatever dog is chosen, the sportsman must, if he wishes for success in the field, follow the advice given at page 47, under the head of Red Grouse.

Several instances have at different times been given of birds which had been shot at, but were actually flying off, suddenly falling to the ground with a wing broken. Mr. A. Hussey has mentioned two such cases in the "Zoologist," one of which related to a Partridge. Mr. C. St. John has also mentioned the Wild Swan and the Mallard as having fallen to his gun in a similar way. The explanation of this fact is, no doubt, that a single shot had struck the bone of the wing, and either splintered or slightly cracked it, so as to weaken it, but not sufficiently to disable the wing. On the bird using all its powers to escape, the weakened bone gives way, and the poor bird falls to the ground. It cannot, however, be of very frequent occurrence.

We have seen at various times numerous records of the extraordinary destruction of birds by sportsmen on particular occasions. These exploits have always appeared to us to savour but little of the true spirit of sporting. What pleasure there can be in killing twenty, thirty, or even eighty-eight brace in a day we cannot conceive;* let us have the gratification of shooting three or four brace, and of seeing our dogs performing well; while we also are able to enjoy the scenery around us, and we envy no man such wholesale butcheries; the recollection of such a day's work would never leave us; we never have engaged, and we hope we never shall, in any similar abuse of the gun.

In preserving Partridges, it is absolutely essential that the old cock birds be kept down within proper limits; if this is not the case the contests for the hen birds are so great that incubation is seldom perfected. On this subject Daniel says, "According to Ray, there are one-third more male than female Partridges hatched; and it is well known the old cocks will drive the young off the ground, and afterwards frequently fight until they kill each other. (Partridges, in this respect, differ from Pheasants; they will have a certain range to themselves, whilst Pheasants will hatch and live quietly with their broods close together.) When too many birds are left, these contentions are sure to happen; and the consequence is a scanty produce, for the female is so pursued, that she drops her eggs in various places, forming no nest, and perhaps never laying two eggs in the same spot. So well aware was the Duke of Kingston of this circumstance, that he always had the Partridges netted upon his manors as soon as paired, and destroyed all the cocks. The late Mr. Doughty, of Leiston, who was an excellent and most observant sportsman, once preserved an overstock of old Partridges, and declared

* This extraordinary number of birds was shot by Mr. William Coke on the 4th. of October, 1823, in Norfolk. The only palliation for this abominable slaughter is that it was for a wager with Lord Kennedy, who also shot a very large number of birds, but not so many as Mr. Coke.

to the compiler, he did not believe, for two seasons following, there was a covey of young birds upon a tract of near three thousand acres of as fine breeding land as any in the kingdom: he shot, and encouraged the destruction of this stock of ancients by all possible means; and the result was, that the Partridges bred again as abundantly as formerly."

Partridges begin to pair the end of February or very early in March, but should the weather prove severe after this they will sometimes form into covies again. Like other gallinaceous birds, pairing is not effected without many well-fought battles by the males for the possession of the other sex.

The nest is merely a hollow scraped in the earth, with sometimes a few straws, dead leaves, or blades of grass. It is placed under some tuft of grass, or small bush, or in clover, grass, or corn fields. But although these are the more usual situations chosen for the nest, still it is occasionally found in very curious, and one would imagine insecure places. Thus instances are mentioned by Montagu and Daniel, where nests were placed in the broad tops of pollard oaks, and the young birds hatched and carried off in security. Frequently, too, the nest may be discovered near to some well used footpath, and yet the young are very generally reared in these situations, the birds sitting remarkably close, and so escape the eye of the marauding schoolboy. To these may be added the tops of haystacks; and holes in decayed trees in hedgerows, as much as four feet from the ground, as mentioned by Mr. J. Mc'Intosh, in "The Naturalist," vol. i., p. 131. Although the birds pair so early, they do not commence laying till the middle or end of May; or even much later in elevated districts. The female lays from ten to twenty eggs, which are of a uniform pale wood, or olive brown colour, and measure in length about one inch and a half, by one inch and one line in breadth.

The hen alone sits on the eggs, and incubation is completed in twenty-one days. The young run immediately that they are hatched, sometimes even with the shell adhering to them. Although the cock bird takes no part in actual incubation, he remains in the neighbourhood of the nest, and will practice all his arts to entice from it any one whose presence may threaten it with danger. As soon as the young birds are hatched, he joins the hen in leading about and protecting them, and the two will, if occasion require, fight stoutly in their defence: of this Mr. Selby gives a striking instance:—"A person engaged in a field, not far from my residence, had his attention arrested by some objects on the ground, which, upon approaching, he found to be two Partridges, male and female, engaged in battle with a Carrion Crow; so successful, and so absorbed were they in the issue of the contest, that they actually held the Crow till he was seized, and taken from them by the spectator of the scene. Upon search, the young birds, (very lately hatched,) were found concealed among the grass. It would appear, therefore, that the Crow, a mortal enemy to all kinds of young game, in attempting to carry off one

of these, had been attacked by the parent birds, and with the foregoing singular success."

A touching account of the devotion of the Partridge to its young is recorded by Macgillivray. He says, "So great is the affection of the Partridge for its young, that in the very cold and wet summer of 1836, as I have been informed by my friend, Mr. Weir, of Boghead, several pairs were found dead in the fields near Bathgate, with their broods under their wings; they having perished under the influence of cold and hunger rather than expose their tender charge to the inclemency of the weather." In this case we cannot but regret that their affectionate solicitude for their young did not receive the reward it so well deserved.

The young birds continue with the parents until the pairing season, constituting what are called covies. These vary in number, not only with the number of eggs, but also, as we have before stated, occasionally by two or even three broods becoming united, and following one pair of old birds: in such a case they will sometimes number twenty-five or more. Occasionally a large number of eggs will occur in one nest; even as many as thirty-three are mentioned as having been found under one bird, but there can be no doubt that this number was the result of two hens laying in the same nest, which would seem to be no very rare occurrence where Partridges are abundant.

Hatching is usually completed by the middle or end of June; but this must vary considerably in different districts, and be much affected by an early or late spring. A dry summer is very favourable to the breeding of Partridges, and a wet one equally destructive, the young birds being very sensible to the effects of wet and cold.

Eggs which have been mowed out, or otherwise procured, are readily hatched by the domestic hen; the young birds should be supplied with ants' eggs, insects, milk curd, and grits. Like the young Pheasants, reared in the same way, they are very subject to the disease called the Gapes; this may be cured by the same remedy recommended in the case of the young Pheasants.

The Partridge will, should she be discovered upon her nest, carefully cover the eggs on every occasion of her leaving the nest afterwards: we are not sure if this is invariably the case under ordinary circumstances. Mr. St. John states that it covers its nest and eggs with great cunning; entirely concealing, not only the nest itself, but so disposing the surrounding grass, that no vestiges of its track to and fro can be seen. And Mr. Briggs, of Melbourne, on this point, says in the "Zoologist," "In 1840 I surprised a female on her nest, and she had laid only four eggs; being aware that she was discovered, she covered them very carefully over with dead hedge leaves and dried bents, uncovering them every morning to deposit an additional egg, and then concealing them again. So artfully were they hidden from observation, that an eye inexperienced in such matters, could not possibly have ascertained the situation of the nest, which looked precisely like an unused one of a former year."

The Partridge usually lays but one set of eggs in the year, but should the first lot be destroyed, she not uncommonly lays again, the young birds being of course very small, and unfit for sporting purposes in September; and they are said to be always delicate and puny, and seldom to survive the winter.

There is a curious breed of Partridges at Brandsby, about ten miles north of York, which have the horse-shoe mark of a light colour. They are frequently shot by Henry Cholmeley, Esq., of that place. This would appear to be a permanent variety, though some people have supposed it to be a species distinct from the ordinary Partridge.

Varieties of the Partridge are not very uncommon. Several instances are recorded of white birds, sometimes even whole covies. These varieties were not produced by change of the colour of the feathers from cold, but were naturally so, being albinos, with red irides. Others have occurred of a cream-colour, with darker markings.

In October, 1851, Mr. D. Graham, of York, shewed me an old female Partridge, which was shot by W. Garwood, Esq., near York, about the middle of September, which had the upper mandible very much elongated, and curved upwards and backwards. The bird was in good condition. Partridges have also occurred with large horny excrescences projecting from the breast, being diseased enlargements of the cuticle.

A similar malformation, which ran through most of the covey, is recorded by J. Dixon, Esq., in "The Naturalist," vol. iii., page 37. He says that a friend of his shooting near Sherburn, Yorkshire, once sprung a covey of Partridges, out of which he shot eight young birds, each of which had the bill elongated and recurved. "The old birds escaped, which made it impossible to ascertain whether the singularity was hereditary or not."

The adult male has the bill bluish white; irides, hazel. Behind the eye is a small triangular patch of naked skin, red and papillose. Top of head and back of neck, gray brown. Forehead, eyebrows, cheeks, and throat, pale brownish orange. Back, wing coverts, rump, and upper tail coverts, wood brown, spotted and marked transversely with two shades of chesnut brown. Neck and upper breast, bluish gray, with dark gray zigzag lines closely arranged. Flanks, the same colour, banded with pale chesnut brown. On the lower breast is a large horse-shoe-shaped patch of fine chesnut, margined with yellowish white. The wing coverts and scapulars have the shafts of the feathers of a pale wood-brown, edged with black. Quills, grayish black, with numerous pale brown transverse bars. Tail feathers, brownish red. Legs and toes, bluish gray; claws, brown.

The adult female has less of the brownish orange on the forehead, eyebrows, cheeks, and throat. The gray brown feathers of the top of the head are edged with white. The horse-shoe mark on the lower breast is either wanting, or else pale in colour, and not so well marked as in the male.

The male is twelve inches and a half in length; the female twelve inches.



RED-LEGGED PARTRIDGE.

RED-LEGGED PARTRIDGE.

GUERNSEY PARTRIDGE. FRENCH PARTRIDGE.

<i>Perdix rubra,</i>	.	.	.	JENYNS.
<i>Perdix rufa,</i>	.	.	.	LATHAM.
<i>Tetrao rufus,</i>	.	.	.	BEWICK.
<i>Perdrix rouge,</i>	.	.	.	TEMMINCK.

Perdix—A Partridge.*Rubra*—Red.

THE introduction of this bird into England took place in the reign of Charles the Second, who had some pairs turned out in the neighbourhood of Windsor, in the hope that they would become naturalized; this, however, does not appear to have been the case, as they disappeared in the course of a few years. Since that period various noblemen and others have introduced them into their preserves, with more or less success; but it seems to be very questionable whether it is any advantage to encourage them to increase, for wherever they have done so the Common Partridge is found to diminish before this more powerful bird; as a game bird, too, it is much inferior to its congener, both on the table and in the field, as will be seen on reference to its habits farther on. At present it may be found in several of the southern and eastern counties of England, but it does not appear to have been killed in Scotland.

In Ireland, Mr. Thompson states that he was informed by T. W. Warren, Esq., (Feb. 3rd., 1844,) that it had been introduced a few years previously into the county of Galway, by Mr. Gildear, but with what success he did not know. Two were shot near Galway previous to 1844; and one was shot near Clonmel on February 4th., 1849.

On the continent it occurs in various countries, particularly the southern ones—in Bohemia, Austria, and Switzerland; is very abundant in France, Italy, Spain, and Portugal; Jersey, Guernsey, and Madeira; in the Islands of the Mediterranean; in Asia; and it is said also in Africa.

It has been suggested by some, and it certainly is quite possible, that a few of these birds may make their appearance naturally in some of the southern counties, having flown across the channel from Jersey or Guernsey, where they are very abundant. The

distance, some eighty or ninety miles, is not too much for a bird so strong on the wing as the Red-legged Partridge.

As a bird for the table it is generally considered much inferior to our native Partridge; but some consider it to have more flavour. The flesh is white, but rather dry. We have never had an opportunity of tasting this bird, and therefore cannot pronounce our own opinion on its merits in this respect. In France and elsewhere it is greatly esteemed.

The habits of the Red-legged Partridge differ considerably from those of the common species. In its haunts it is said to be fond of mountainous districts, where there is an abundant supply of wood; and in this country it prefers rough heathy grounds to the corn and grass fields so congenial to the habits of its congener. Unlike our common species, which is essentially a ground bird, the Red-legged Partridge will frequently perch upon trees. Mr. Daniel, shooting near Colchester in 1777, "found a covey of fourteen; they were in a very thick piece of turnips, and for half an hour baffled the exertions of a brace of good pointers to make them take wing, and the first which did so immediately perched on the hedge, and was shot in that situation without its being known what bird it was. A leash more were at length sprung from the turnips, and shot, and two days after a brace more of them was killed by another person." From that time, until November, 1799, he never shot one. He was then out at Sudbourn "with a gentleman, who was particularly anxious to kill some of these Red Partridges, and hunted with a brace of capital pointers for them only. The instant the dogs stood, the red birds ran, and always took wing, (notwithstanding all the speed exerted to head them,) at such distances as to be out of the range of the shot from any fowling-piece." On the same ground and day Mr. Daniel succeeded in shooting two brace and a half, hunting with springing spaniels. He conjectures that they were unaccustomed to the questing of the spaniels, never having before been attacked in that way, and so crouched till obliged to rise.

When wounded they will run into any hole, such as a rabbit-burrow. These birds also congregate in large packs, instead of remaining, even for a few months, as covies. The following curious particulars we take from Daniel's "Rural Sports:"—"According to Tournefort, they are so tame in the Isle of Scio, that they are driven to seek their food in the fields like so many sheep, and that each family intrusts its Partridges to the common keeper, who brings them back in the evening, and he calls them together with a whistle. Another account states that in the country round Trebizond, a man was seen leading above four thousand Partridges; he marched on the ground, while the Partridges followed him in the air, until he reached a certain camp, three days journey from Trebizond; when he slept, the birds alighted to repose around him, and he could take as many of their number as he pleased."

In Provence persons have acquired the art of assembling numerous flocks of Partridges,

which obey the voice of the conductor with wonderful docility, and it is most probable they were birds of this species which Willughby notices, "That a certain Sussex man had, by his industry, made a covey of Partridges so tame, that he drove them before him, upon a wager, out of that county to London, though they were absolutely free, and had their wings grown."

This speaks a good deal for the docility of the Partridge, but very little for the wisdom of the teacher, who might, we think, have spent his time much more usefully both to himself and others.

The Red-legged Partridge is, like our common species, monogamous.

According to Meyer, its call-note sounds like the word 'cockileek,' and is frequently uttered during the spring by the male bird.

The food of this bird is much the same as that of the bird last described, consisting of numerous kinds of insects, such as ants, spiders, grasshoppers, flies, caterpillars of all kinds, small snails, corn, young shoots of grass, clover, etc.

The time of pairing is about the same as that of the Common or Gray Partridge, early in the spring; and at this season they are very pugnacious, and fight hard for their "lady loves."

The nest, which consists of a small quantity of dry leaves or grass, is placed on the ground in much the same situations as that of the Common Partridge. The female lays from fifteen to eighteen eggs, which have a reddish yellow white ground, spotted and speckled with reddish brown. They are in length one inch seven lines and a half, by one inch three lines in breadth. The habits and food of the young birds are said to be similar to those of the young of the Common Partridge. The Red-legged Partridge will not breed when in confinement, and indeed is not very tolerant of any attempts to domesticate it.

The cock bird does not assist the hen in incubation, but deserts the nest till the young birds are half-grown, when he joins the hen in her care of them.

The adult male has the bill and naked space about the eye, bright red, the irides red. The upper parts of the head and the hind neck are reddish brown; the forehead, ash gray. The back, wings, and upper tail coverts, and four middle tail feathers are reddish brown, tinged with gray. A portion of the outer web of all the primaries, except the first, and of seven of the outer secondaries, are ochre-yellow. The six lateral tail feathers on each side, brownish red. The throat and cheeks are white, tinged with gray: a band of black from the bill to the eye, and thence down the side of the neck, becoming broader, and meeting its fellow on the fore part, where it expands. Sides and fore part of neck, grayish white, tinged with brown, and spotted with black. This part is margined below with grayish brown, succeeded by a broad band of ash gray. The middle of the breast, abdomen, lower tail coverts, and tibial feathers are light red.

The feathers of the sides with a broad band of light red, succeeded by another of ash gray, then two narrow bands, one white, the other black, and a terminal band of red. Legs and feet, bright red; claws, a little dusky. Legs with a blunt spur.

The female is somewhat less, wants the knob on the tarsus, and has the colours as in the male, but a little fainter. The black crescent on the neck is narrower, and the spots of the same colour on the lower part are much smaller. (Macgillivray.)

The length of the male is fourteen inches; of the female one inch less.



BARBARY PARTRIDGE.

BARBARY PARTRIDGE.

ROCK PARTRIDGE. GAMBIA PARTRIDGE.

Perdix petrosa, GOULD.
Perdix gambra, TEMMINCK.

Perdix—A Partridge.

Petrosa—Belonging to rocks or crags.

THIS extremely pretty bird can hardly with propriety be called a British Bird; yet two specimens having been obtained in an apparently wild state, it is now admitted into the British list by most of our naturalists. The two specimens which have occurred in England were both females; they both were procured somewhere about the same time; one was picked up dead in a field at Edmondthorpe, about six miles from Melton Mowbray, in April, 1842. Mr. Yarrell states that it was afterwards in the possession of Mr. Robert Widdowson, of Melton Mowbray. The other was shot at Sudbourn, in Suffolk, and is now in the possession of Mr. Thomas Goatley, of Chipping Norton, Oxfordshire. This bird is supposed to have been a descendant of some birds hatched from eggs imported into England by the Marquis of Hertford and Lord Rendlesham, about 1770, by whom the country about Sudbourn was stocked with Red-legged Partridges. It has been thought that some eggs of the Barbary Partridge may have been introduced along with those of the other species. This seems to us to be by no means a satisfactory solution of this bird's occurrence in England; for it is hardly likely that the breed would remain so long as seventy years unnoticed, or that a solitary individual should be the only one to be found surviving, *sola superstes*. We incline to the opinion that both these birds were accidental stragglers into this country, or else the produce of eggs accidentally introduced with others at a much more recent date than 1770.

The natural habitat of this bird, as indicated by its English name, is the northern part of Africa; but it also occurs in Majorca, Minorca, Corsica, Sardinia, Sicily, Malta, Calabria, and the mountainous parts of Spain; some parts of France, Germany, Italy, and Greece. It is also found in Asia.

Its habits appear to assimilate more to those of the bird last described than to those

of the Common Partridge, and we accordingly find it generally frequenting, in its native haunts, such parts of lonely mountainous districts as are covered with small under-wood, and where it can follow its instincts unmolested by man.

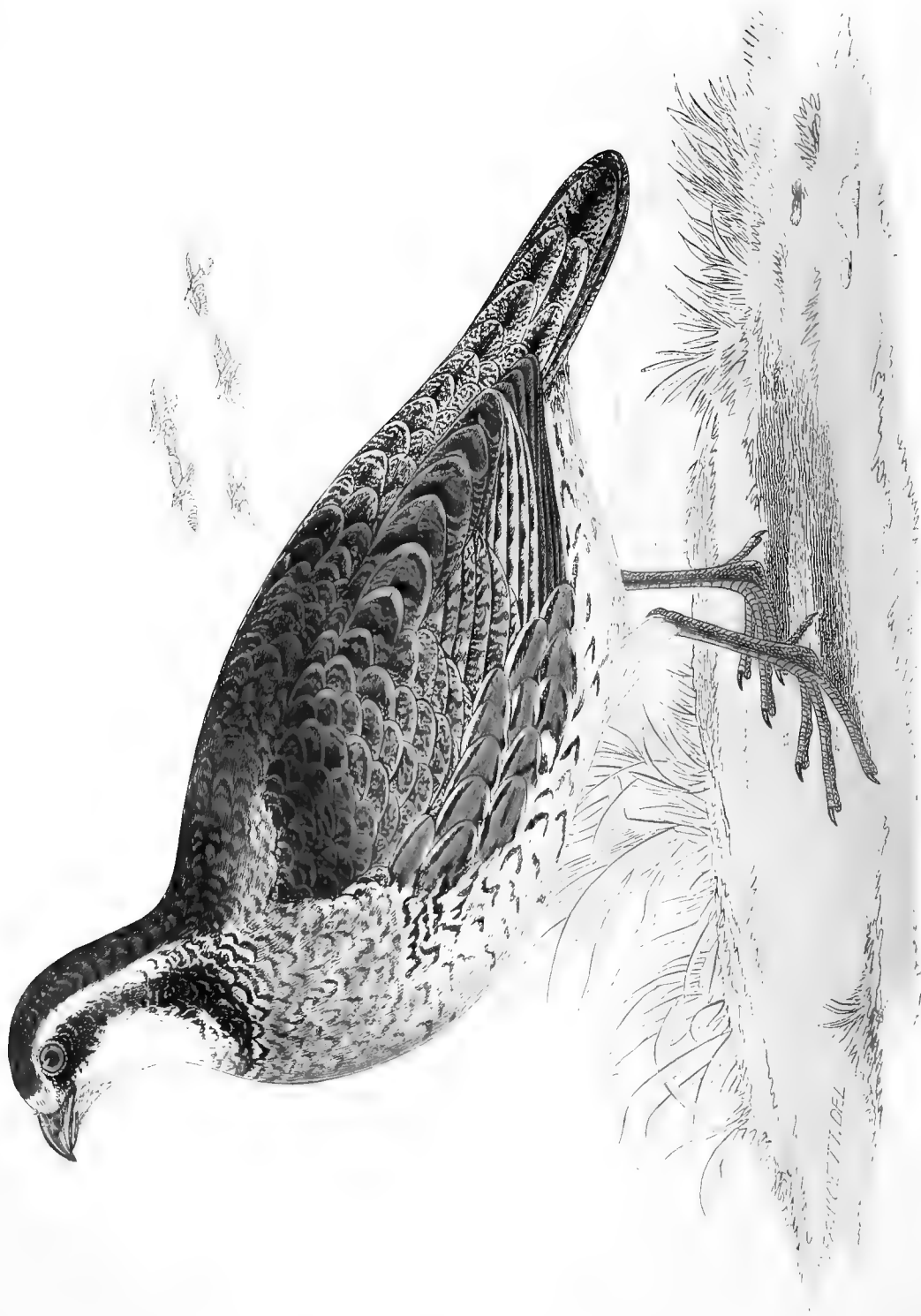
The nest is placed on the ground, and the female lays about fifteen eggs, which have a yellowish ground colour, thickly spotted with oil-green spots.

It is mentioned by Yarrell that "the Zoological Society have received skins of this Partridge, sent by Messrs. Dickson and Ross from Fezzan. The note appended was as follows:—"Killed in December, 1842. Very common all over the country, frequenting ravines, hills, and all places where they can find cover, and often met with even in our gardens; flies in covies; a shy bird; used as food by the natives, though its flesh is dry and without flavour. Its heart is so small that it does not exceed that of a Sparrow."

The bill is red; irides, hazel; naked skin round the eyes, red. Top of the head and back of neck, burnt umber, prolonged into a broad gorget of the same colour dotted with white spots, which runs to the bottom of the neck in front. Sides of the face, chin, and throat, light ash-colour; ear coverts, wood brown, joining the gorget. Neck above and below the gorget, light ash-colour; breast, buff; back and rump, grayish brown. Quill feathers, brownish black on inner web; the outer web of the first, gray brown, of the others yellow brown. Wing coverts, slate-colour, the feathers edged with reddish brown. Side feathers with broad bars of white, black, and red brown. Belly, vent, and under tail coverts, buff. Tail, grayish brown. Legs, feet, and claws, red. The legs have a small blunt spur.

The female is like the male, but with less brilliant colouring, and is without the spur.

The length of the male is thirteen inches. The female is rather smaller.



VIRGINIAN PARTRIDGE.

VIRGINIAN PARTRIDGE.

VIRGINIAN COLIN. AMERICAN QUAIL.

<i>Ortyx Virginiana,</i>	.	.	.	MACGILLIVRAY.
<i>Tetrao Virginianus,</i>	.	.	.	LINNÆUS.
<i>Perdix Virginiana,</i>	.	.	.	LATHAM. WILSON. AUDUBON.
<i>Coturnix Marylanda,</i>	.	.	.	FLEMING.

Ortyx. *Ortuz*—A Quail. *Virginiana*—Of Virginia.

THIS bird, a native of North America, as its name implies, has been on numerous occasions turned out in this country with a view to its permanent establishment as a game bird; the accounts of the success or failure of the attempts are by no means satisfactory; though there seems to be no doubt that it has, on some occasions, nested; yet if the success had equalled that which attended the introduction of the Red-legged Partridge, we think more reports of their being shot, would have found their way into the magazines and papers. Montagu states that one was shot near Mansfield, which was in the collection of the late Earl of Derby. A number of these birds were turned out many years ago by Edward John Littleton, Esq., on his estate at Teddesley, in Staffordshire, the probable fate of which is hinted at farther on. A few years back Prince Albert introduced them near Windsor, but we have not heard how they succeeded. One was shot near Chelsham Court, Surrey, in October, 1845, as recorded by W. Borrer, Esq., Jun., who supposes it may have been one of those turned out by the Prince. Mr. Borrer says, "I had a long conversation with the bailiff, (who shot the bird,) who informed me that the bird had been heard, and occasionally seen, during two or three months, but that owing to its great powers of ventriloquism, and the difficulty of flushing it, it was not till the middle of October, 1845, that he succeeded in shooting it. The bird rose from a broad hedge-row, with underwood and timber, (which we in Sussex call a "Shaw,") whilst he was beating with some spaniels for a cock Pheasant, which had been marked down there. It flew very straight, and very swiftly; something in the manner of the Kingfisher. The note was described to me as consisting of two short, low whistles, followed by one long, loud, and shrill." The Rev. Richard Lubbock informed Mr. Yarrell

that a nest, with numerous white eggs, was found at Barton, in Norfolk, which, there is little doubt, was that of this bird; for a bird like a Partridge, but smaller, was seen not far from the spot. Mr. Lubbock also states that Mr. Coke turned out a number of these birds at Holkham, in the same county, but he did not know with what success.

A male and female were shot at Rotherfield, near Tunbridge Wells, "a few days before" the 4th. of January, 1850, and were seen by Mr. Walter W. Reeves, of that place. The female rose with some Partridges, with which it was apparently feeding. Mr. Reeves could not ascertain that any had been turned out in that district. The record is in the "Zoologist," for 1850.

Mr. Yarrell states that a specimen of this bird was shot within the last few years in the county of Northumberland, which found its way into the collection of Mr. J. Hancock, of Newcastle-upon-Tyne; "and another was shot off a tree near Bristol, as mentioned by Mr. Hewitson, in the second edition of his work on the eggs of our British Birds. In September, 1844, a couple were shot near Egham, as they rose from a pea stubble. On the 29th. of October, in the same year, a pair were killed out of a small covey of seven or eight, in a copse near Egham, by Wyatt Edgell, Esq. This latter occurrence was communicated to me by G. R. Marten, Esq., who very kindly allowed me an examination of the birds; and in April of the present year, 1845, a very fine old male bird was obtained between Weybridge and Chertsey by a boy, who, hearing the call-note of a bird, whistled a similar note in answer; the bird was deceived by the imitation, and came so close up to him that he killed it with a stone."

The Virginian Partridge is found throughout nearly the whole of North America, as far north as Canada and Nova Scotia. In the middle and southern states it is stationary, but in Canada and Nova Scotia it is migratory.

As an article of food, Wilson says, "The flesh of this bird is peculiarly white, tender, and delicate, unequalled in these qualities by that of any other of its genus in the United States."

The habits of this bird are a good deal like those of the Partridge, but it appears considerably more arboreal, in not only perching readily in trees, but sometimes even roosting in them; the borders of woods, too, are among their haunts, though it would appear that the progress of cultivation induces them so far to change their natural habits, as to frequent the corn-fields for food and shelter. Their mode of sleeping or jugging is similar to that of the common Partridge, in a small circle, with their heads outwards.

They are said to be very pugnacious, and to assemble in large flocks or packs.

They are monogamous, and incubation is performed by the female alone.

The note of this bird is thus described by Wilson:—"At this time, (early in September,) the notes of the male are most frequent, clear, and loud. His common call consists of two notes, with sometimes an introductory one, and is similar to the sounds produced by

pronouncing the words "Bob White." This call may be easily imitated by whistling, so as to deceive the bird itself, and bring it near. While uttering this, he is usually perched on a rail of the fence, or on a low limb of an apple tree, where he will sometimes sit, repeating, at short intervals, "Bob White," for half-an-hour at a time. When a covey are assembled in a thicket, or corner of a field, and about to take wing, they make a low twittering sound, not unlike that of young chickens; and, when the covey is dispersed, they are called together again by a loud and frequently-repeated note, peculiarly expressive of tenderness and anxiety."

Their food consists of corn, buckwheat, Indian corn, seeds and berries of various kinds, grass, and a large proportion of insects.

As to the sporting qualities of this bird, Wilson says, "About the beginning of September, the Quails, being now nearly full grown, and associated in flocks, or covies, of from four or five to thirty, afford considerable sport to the gunner. Like all the rest of the gallinaceous order, it flies with a loud whirring sound, occasioned by the shortness, concavity, and rapid motion of its wings, and the comparative weight of its body. The steadiness of its horizontal flight, however, renders it no difficult mark to the sportsman, particularly when assisted by his sagacious pointer."

The following method is adopted, according to Alexander Wilson, in North America for the capture of the Virginian Partridge:—"To the ravages of the gun are added others of a more insidious kind; traps are placed on almost every plantation, in such places as they are known to frequent. These are formed of lath, or thinly-split sticks, somewhat in the shape of an obtuse cone, laced together with cord, having a small hole at top, with a sliding lid, to take out the game by. This is supported by the common figure 4 trigger; and grain is scattered below and leading to the place. By this contrivance, ten or fifteen have sometimes been taken at a time. They are sometimes brought alive to market, and occasionally bought up by sportsmen, who, if the season be very severe, sometimes preserve and feed them till spring, when they are humanely turned out to their native fields again, to be put to death some future time, 'secundum artem.'"

The time of pairing and nesting, in this country, is about the same as that of the Partridge; the nest is, however, very different, being covered at the top, and having a hole at the side for ingress and egress: it is placed on the ground.

The eggs are about twelve in number; Alexander Wilson says fifteen to twenty-four, and are pure white. They measure in length one inch and two and a half lines, by one inch in breadth, tapering much towards the small end.

With respect to the time occupied by incubation in this country, we have no authentic information, but of America Wilson says, "It has been stated to me, by various persons, at four weeks, when the eggs were placed under the domestic hen. The young leave the nest as soon as they are freed from the shell, and are conducted about in search of food by the female;

are guided by her voice, which at that time resembles the twittering of young chickens, and sheltered by her wings, in the same manner as those of the domestic fowl, but with all that secrecy and precaution for their safety which their helplessness and greater danger require." The habits of this bird when surprised with her young, are very similar to those of our own Partridge; feigning a broken wing or injured leg, so as to draw attention to herself till the chicks have had time to secrete themselves, which they instantly do when alarmed.

We have had a letter, from which we make the following extract, handed to us by the Rev. F. O. Morris, to whom it was addressed. It is of considerable interest, as it contains a recent instance of this pretty little bird attempting to breed in this country:—"Seeing in the last number of your "British Birds" a plate of the Virginian Partridge, I write to say, in case it should be of any interest to you, that I brought to England from Canada, in the spring of 1852, two brace of them alive, and that in the autumn of the same year one of the hens laid an egg, which, I am told, is rather uncommon in England. Since then they have all died, suddenly, one by one; the last having died about six weeks ago. All of them appeared to be in good health, and were in excellent plumage to the time of their deaths."

I remain, Sir, Yours truly,

HENRY NEWDIGATE,

West Hallam, Derby, February 4th., 1854.

Rifle Brigade.

The following account of an attempt to naturalize this pretty little bird in Staffordshire, recorded in "Loudon's Magazine" in 1831, contains many interesting particulars. The writer signs himself J. C.:—"A few years ago I purchased two brace of these elegant little birds from Mr. Cross, of Exeter Change, London, and brought them home with me in the coach. I have a small garden walled round and covered with wire, into which I turned them, but each brace separated from the other by a wire partition. Towards the latter end of May I perceived one of the cock birds carrying straws, and twisting them about over his head; and I found they were making a nest within a bundle of pea-sticks, which were placed in the garden for them to run under and hide themselves. This nest was the joint production of male and female; it was placed on the ground within the pea-sticks, and shaped much like that of the Wren, with a hole on one side, and covered over at top. After the hen had laid about twelve eggs, she began to sit, and with as much assiduity as our common hen. When I thought it was her time to hatch, I examined the nest, and found it deserted, and the egg-shells, which had evidently contained young birds, lying about. Much pleased with this circumstance, I went cautiously about to find the dam with her little ones, and after searching a considerable time, the first intimation I had of her presence was from her flying in my face with

great agitation, like our common hen. I retired much gratified, and observed the young ones, nine in number, collect again under the wings of their mother. The assiduity of this excellent parent was truly exemplary, and her attention unremitting, and she reared them every one with very little trouble. What is very singular, there were eight cocks and but one hen, all of whom were reared till they moulted and got their adult plumage; when, from some cause which I could never ascertain, they began to droop one after another, and before Christmas all the young birds died. Though I examined the stomachs and gizzards of most of them, yet I never could find out the cause of their deaths; but I have little doubt of its being some deleterious substance picked up in the place where I separated them from the old ones, soon after they became full fledged, as the old ones escaped this mortality, and the cock bird is now living, (October, 1830.)

The other pair never bred, but it was easily accounted for, as the hen was unwell from the first time I turned them down, and she lingered on to October, and then died. Previously to and during the time the hen was sitting, the cock serenaded her with his harsh and singular notes, some of them very similar to the mewling of a cat. He had also a peculiarity of constantly running round in a circle, till the ground whereon he performed his evolutions was worn as bare as a road, and the turf trodden down much in the same way as it is by the Ruff in the fens, during the season of incubation. Nothing could be more cordial and harmonious than this happy family. When the shades of evening approached, they crowded together in a circle on the ground, and prepared for the slumbers of the night by placing their tails all together, with their pretty mottled chins facing to the front in a watchful round-robin. When food was thrown in to them, which consisted chiefly of spirted barley and wheat, and occasionally bread, the male bird would peck at the grain, but not eat any himself until he had called his family around him first to partake of the food; which he did with many soft blandishments, and with much strutting, and spreading of the wings and tail.

I was much disappointed at the loss of this interesting family, and I waited with some impatience for the result of another season. The season at length arrived; they built their nest again as usual; the hen laid about sixteen eggs; when, to my great mortification, just as she had begun to sit, I found her dead one morning, and cannot otherwise account for the circumstance than by supposing that something must have frightened her in the night, and caused her to fly up with violence against the wires, which proved fatal to her. Thus ended my hopes of domesticating this elegant little bird, as I have never been able to procure another female, though I have applied in London for that purpose. The guard of a coach informed me that he had the care of a basket of these birds by his coach; that they all, by some accident, got out and flew away; and that in the part of country where they made their escape, (which I have now forgotten,) they had bred and increased exceedingly. I have also heard of their doing well in some parts of the south of this kingdom. I

know that a quantity were turned down upon the large demesne of Edward John Littleton, Esq., M. P., at Teddesley, in Staffordshire, and that they did not breed at all, but straggled away, and some of them were shot ten or fifteen miles from his estate."

The success which attended this experiment, proves that these birds will readily breed in confinement; and probably those bred and reared in this country would more easily become naturalized, when turned out, than those imported from America.

The adult male has the bill black; irides, dusky. Forehead, black; a black band over each eye; between this and the eye is a white band, extending from the bill over the ear coverts half way down the neck; chin and neck, white; a black streak commences at the base of the upper mandible, and running under the eye, swells at its posterior part into a broader band, which running down the neck, curves forwards and joins its fellow on the opposite side. Upper back and sides of neck, red brown; most of the feathers on the upper parts are edged with blue gray or brownish yellow; lower back, rump, and upper tail coverts, grayish brown, mottled with black; breast and abdomen, yellowish white, the feathers edged with black. Quills, grayish brown; sides and flanks, buff white, marked with chesnut; tail feathers, twelve, bluish ash-colour. Legs and toes, reddish brown; claws, dusky.

The female has the parts of the head and neck, which are white in the male, of a light yellow brown. The edges of the scapulars and tertials are whiter than in the male. The upper parts are all lighter coloured, and the under parts have less of the chesnut colour on them.

The length of the male is about nine inches and a half. The female measures half an inch less.



QUAIL.

QUAIL.

<i>Coturnix vulgaris</i>,	.	.	.	.	.	FLEMING.
<i>Perdix coturnix</i>,	.	.	.	.	.	LINNÆUS.
<i>Coturnix dactylisonans</i>,	.	.	.	.	.	GOULD.
<i>Caille ordinaire</i>,	.	.	.	.	.	TEMMINCK.

Coturnix—A Quail.*Vulgaris*—Common.

THIS pretty little bird has been well known from the very earliest times, and has always excited much attention, from its migratory habits. This is supposed to be the Quail mentioned in the Holy Scriptures, as having miraculously supplied food for the children of Israel in the wilderness; and, although this is disputed by some, still, as we know that the Almighty generally uses ordinary means, even in producing extraordinary results, we are disposed to think that the evidence is in favour of this species being the bird, because, as Mr. Yarrell has well remarked, this is the only species of Quail that migrates in multitudes: this fact added to the previous probability, we think, almost settles the question, as far as it can be settled. The enormous numbers that migrate in a body have caught the attention of naturalists from a very early date; thus we find Pliny stating that a flock of Quails in their migration, settling upon a vessel sailing in the Mediterranean Sea, has been known to sink it, so vast were the multitudes that alighted upon it; mistaking it, no doubt, for a rock or small island, they attempted to rest their weary wings, and not only destroyed it, but themselves also. The vessel must, however, have been some of the smaller barks navigating the calm waters of the Mediterranean.

The multitudes that arrive in the spring, on their way northwards, at all the shores of the Mediterranean, and islands of the Grecian Archipelago, afford a most profitable and valuable harvest to the inhabitants; who, on their advent, sally out and attack them in every way, so that myriads must be annually destroyed among the various islands and places where they first alight. Guns, nets, sticks, and stones are all called into requisition, and the whole country is in a state of excitement; and, as Macgillivray says, "According to an eye-witness, enviable is the lot of the idle apprentice, who, with a borrowed old musket or pistol, no matter how unsafe, has gained possession of the farthest accessible rock, where there is but room for himself and his dog, which he has fed with bread only all the year round for these delightful days, and which sits in as happy expectation

as himself for the arrival of the Quails." Tens of thousands are often taken in a single day, and yet each year the ranks of this invading yet welcome army are constantly renewed, to be again the unresisting victims of an indiscriminate slaughter. In the autumn they revisit the northern shores of the Mediterranean, on their way to the more southern winter quarters, and many are again destined to active persecution by their unsatisfied admirers.

This species of Quail is not only a summer visitant to England, Scotland, and Ireland, but so many are found to remain all the year, particularly in Ireland, that these can hardly be said to be merely accidental exceptions.

On this point we may refer our readers to a paper by the Rev. W. Waldo Cooper, in "The Naturalist," for December 1853, in which he enumerates a number of instances in which the Quail was met with in the winter months; and, in the May number for the same year, the Rev. Frederic Fane says, "I have thought it singular, that, with one exception, the only occasions on which I have had opportunities of killing Quails, birds supposed to leave England for the winter months, have been in the months of December and January, in Lincolnshire, Hampshire, and Dorsetshire." Mr. Thompson has also collected a great number of instances in which this bird has occurred in Ireland in the winter months, satisfactorily proving to our mind, that a large number, at any rate, do not migrate, and in some districts very few, if any. He says that the climate of Ireland is so mild, that the Quails have no difficulty in procuring food during the winter, in most years. May not the readiness with which they obtain sustenance materially influence their movements as to migration? He concludes with the following remarks: "Although more Quails appear to have wintered in Ireland, in the comparatively mild seasons of late years, than formerly, I have the testimony of a veteran sportsman to the effect, that, from his having met with them in the counties of Down and Antrim, every winter during the last sixty-five years, he had always looked upon them as indigenous, and not as migratory birds. Others bear witness to the same effect for half that period, and have considered them (in the Island Magee, etc.) to be as common in winter as in summer."

However, certain it is that the great bulk arrive in these countries early in May, the males coming before the females, and leave in September or early in October. In England and Scotland they cannot be said to be anywhere numerous, while in Ireland they are stated to be very common; and we certainly remember when living in Dublin some eighteen or nineteen years ago, very often meeting with these birds in our excursions into the country, within a few miles of that city. Out of these islands it is said to be found very generally distributed over Europe, Asia, and Africa. In all these countries they are more or less migratory, and the want of food, rather than change of climate, would seem to be the inciting cause of this movement. Their migration is made during moonlight nights, resting, if possible, during the day. Of course when passing over the sea, their flight must be continued both day and night.

As an article of food, Quails are, and always have been, much esteemed; but Mr. Yarrell asserts that, from his own experience, he considers them a very heating food. Be this as it may, most people would be disposed to quarrel with the quantity rather than the quality of the meat.

The localities chosen by the Quail in these countries are the same as those frequented by the Gray Partridge; namely, meadows, corn, turnip, pea, and bean fields. It is seldom found on high ground, or in wet marshy land. The Quail is a ground bird, and it obtains its food in the same situations and way as the Partridge does. The feeding times of the Quail are early in the morning, and again late in the evening till dusk. In the day-time it skulks and hides in fields affording suitable cover, and if the sun be shining warmly, it will bask and sun itself on the sides of hedges, dusting and preening its feathers like the Partridge. Except during their migrations, they would seem not to be of very sociable habits, for the pugnacious feelings of the males are instantly called up whenever two of that sex happen to meet. The Quail is very swift of foot, and also flies with great ease and quickness, much after the manner of the Partridge; its flight is seldom to any distance, and when it drops it has the habit of running its head into a tuft of grass, or behind any shelter, imagining that it is then safe; and when in this position it may be readily captured by the hand.

In "The Naturalist," for December, 1852, are some curious observations by J. Mc'Intosh, Esq., on the hour at which various birds wake in the morning, from May to July. He there states that the Common Quail, "opens its eyes to light and life," from half-past two to three.

The Quail is very generally considered to be polygamous in its habits, yet this would appear to be very doubtful; for in these countries they certainly seem to pair, and though the male bird does not assist in incubation, yet he joins the female when the young are hatched, and aids her in bringing them up. Mr. Thompson has perhaps collected more evidence in favour of its being monogamous than any one else, and we shall therefore make a few extracts from his interesting and valuable work, bearing upon this point. "The Quail is generally characterized as a polygamous bird, which I cannot consider correct, at least in reference to Ireland. The universal impression, as far as I have questioned persons well acquainted with the bird, is, that it regularly pairs. Indeed in the north it is generally met with in pairs, not only in summer but in winter. Mr. Poole, considering the pairing as a matter of course, from these birds having so occurred to him in the county of Wexford, remarks, under date April 11th:—"A Quail, which has through the winter frequented a meadow in my daily walk, has, I observe, to-day, procured for itself a mate, but whether from the spring migration, or from some neighbouring locality, as is more probable, must remain a mystery, except to the respective parties." "But the nearest approximation to proof is in the following cases. The observant gamekeeper at Glengariff,

(Cork) states, that in almost every instance in which he has found the young brood, the *two* old birds were with them. My friend, William Ogilby, Esq. furnishes this interesting note:—"In walking through a grass field on my farm at Liscleen, (Tyrone,) about the 15th. or 16th. of May, 1849, I suddenly flushed a Quail, which rose so close to my feet that I was very nearly trampling on it. On looking down, I readily distinguished the lair in which it had been sitting, with a small heap of droppings on one side, evidently indicative that the place had been occupied for some days. But my curiosity was excited by perceiving close by (within about a foot,) a dead Quail, which I presume must have been its mate, and which, from its condition, I should judge to have lain there for four or five days; during all which time it was apparent that the widowed survivor had never deserted the body. This instance of fidelity in a class of birds, of the mental character of which we know so little, strongly attracted my attention, and I think may possibly be interesting to you in more respects than one. You will draw your own conclusion as to the value of the anecdote in its bearing on the question of the monogamous or polygamous habits of the Quail. The crop of the dead bird was distended with seeds of grass, mixed with a large number of Scarabæi and other insects." These facts certainly go a long way to prove that these birds are monogamous, in these countries at any rate, whatever they may be on the continent.

The note of the Quail has been variously expressed by different observers; Mr. Thompson compares it to the words, 'wet-my-foot;' Meyer says that in the spring of the year they say 'bubewee or brubrub;' when frightened they chirp like young chickens; and if caged during the time of migration they incessantly repeat the word 'pievoi-ree, pievoi-ree,' in a fretful tone, at the same time endeavouring to escape. It has also been compared to 'whit, whit, wheet,' 'pickerwick' or 'peek-weet-weet.' We have always thought the endeavouring to express the notes of birds, by syllables, a very unsatisfactory method; there are to be sure some exceptions, such as the Kittiwake, and the Peewit, where the note is admirably expressed by the name; but let any one attempt to realize, in the fields, half the strange sounds attributed to birds on paper, and he will soon be disgusted with this method of becoming acquainted with the birds, and will seek some other and more satisfactory plan. We make these remarks without in any way attempting to solve the difficulty; we feel it far too strongly to hope that we should ever be able to surmount what has been so unsatisfactorily attempted by others, far better qualified than we can pretend to be, for this particular duty.

"On more than one occasion in the summer of 1846, Quails, when flying across Belfast Bay by night, were heard to utter their ordinary call."

The food of the Quail, like that of other gallinaceous birds, is varied. Mr. Thompson examined the crops of about thirty Quails, shot during winter and early spring, and found that seven-eighths of the contents consisted of the seeds of various weeds, among

which were those of the various species of Plantain, (*Plantago*,) Persicaria, Dock, (*Rumex*,) Vetches, (*Vicia*,) Chickweeds, (*Stellaria*,) The crop of one bird contained nothing but the seeds of *Stellaria media*, and there could not have been less than three thousand five hundred of them. Another crop was filled with eleven Slugs, (*Limax agrestis*,) To these may be added grain in small quantities; green food such as blades of grass, and other succulent plants. The seeds of the Reed, (*Arundo Phragmitis*,) of the Rushes, (*Juncus*,) of the Spreading Halberd-leaved Orache, (*Atriplex patula*,) together with numerous insects in the summer and autumn months. The gizzard also always contains small stones, which assist in grinding up the food. The above list will amply prove that the Quail does much good to the farmer, by destroying noxious weeds and insects.

In sporting parlance, a family of Quails is called a bevy; in putting them up you are said to flush or raise them: when at rest they are said to be piped. In speaking of numbers you say a brace or a brace and a half.

Pairing takes place in the spring, the time will of course be dependant, in some measure, upon whether the birds have wintered here or only arrived in May. The Rev. R. A. Julian, in "The Naturalist," for January 1852, states that he was informed by a friend that he had seen a Quail's nest near Ely, containing many eggs, on the 26th. of September, 1851; when he found it the old female was on the nest. This was certainly very late for the nesting of this bird, but it is possible the explanation may be that the first nest had been taken or otherwise destroyed, which will sometimes induce birds to incubate a second time.

The nest is simply a slight hollow scraped by the bird in the earth, with a few dried blades of grass or leaves in it. Here the eggs are deposited, from ten to twenty in number; in colour they differ greatly from those of the Partridge;—having the ground reddish yellow, or yellowish white, or greenish, marked all over with spots and blotches of umber brown. In length they measure one inch and one line; in breadth eleven lines. The time of incubation is said to be eighteen days, and is generally completed by the middle or third week in July. The young run as soon as they are out of the shell, and their food is the same as that of young Partridges.

We have never heard of Quails breeding in confinement, but they are readily tamed, and are kept caged in Holland and Germany as song birds, their plaintive, monotonous note being much admired in those countries. Meyer says that a person had a "Quail, which had the liberty of running about his study; and in the same room a favourite setter dog was allowed entrance: by degrees the two animals became acquainted, and the Quail might frequently be seen to lie on the rug near the dog, enjoying with him the warmth of the fire."

The adult male has the bill a gray brown above, and a gray blue below. Irides, hazel. From the forehead to the nape is a narrow streak of yellowish white, having on

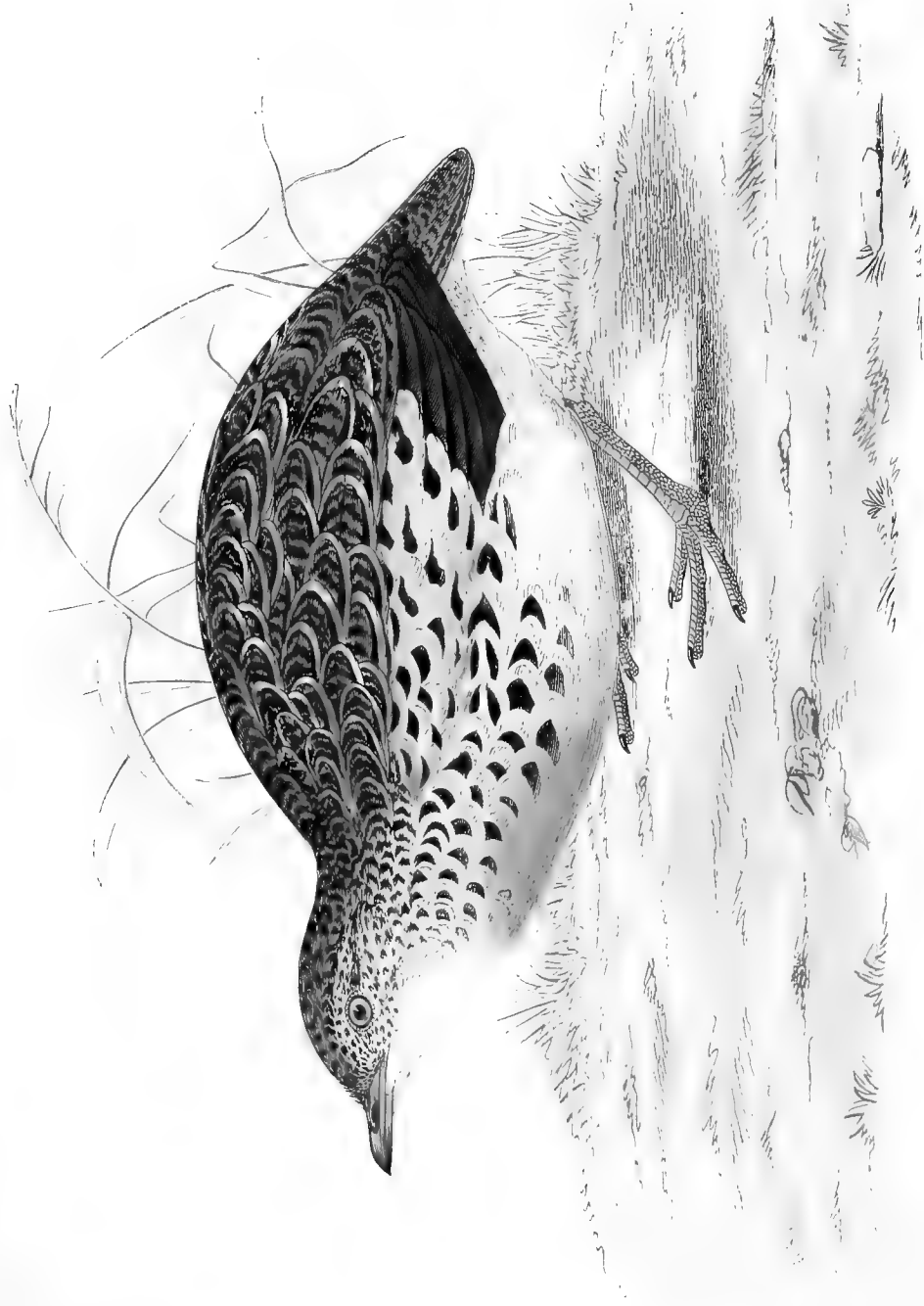
each side a broader streak of dark brown; over the eye is another yellow white line, as long as that on the crown. Chin and throat, white, with a double semicircular band of dark brown running down from under and behind the eye, and having a black patch at the bottom in front. Breast, brown ochre, the shafts of the feathers nearly white; lower breast, abdomen, and under tail coverts of a yellowish white. The upper parts are brown, with the shafts pale brown. Quills, brown, the outer webs marked with light brown, except the first, which has the outer edge whitish. Tail, of twelve feathers, brown; hid by the upper coverts. Legs and feet, yellowish brown.

The female is without the semicircular dark marks on the neck.

The young birds resemble the female, and the males are two years old before they attain the dark bands on the neck.

The weight is about three ounces and a half.

The length of the male is eight inches; the female being half an inch less.



ANDALUSIAN QUAIL.

ANDALUSIAN QUAIL.

ANDALUSIAN HEMIPODE. GIBRALTAR QUAIL.

<i>Hemipodius tachydromus</i>,	.	.	.	.	.	GOULD.
<i>Turnix tachydroma</i>,	.	.	.	.	.	TEMMINCK.

Hemipodius. *Hemi*—Half, and *pous*—A foot. *Tachydromus*—*Tachus*—Swift, and *dromeus*—A runner.

A SOLITARY individual of this little bird was shot on the 29th. of October, 1844, in a barley field in Oxfordshire, within about three miles of Chipping Norton, by a game-keeper, who a few weeks afterwards shot a second; the first only was preserved, and fell into the hands of Mr. Goatley, who was so fortunate as to obtain the Barbary Partridge, as before related. The second specimen was so mutilated by the shot, that it was not thought worthy of preservation. It is singular that no other birds of this species were observed either before or since, for had they visited this country in the spring, as it is possible they did, we might have expected a brood of young ones, which, if they had survived the casualties to which they were exposed, would, by the end of October, have been as strong on the wing as the old birds. Their motives, however, in visiting a country, where they were so inhospitably received, can now be merely conjectured.

On the continent this bird is found in Spain, Andalusia, Arragon, and Grenada.

The Andalusian Quail is a bird of solitary habits, not being found in flocks like many other birds. It is said to be fond of being among low underwood and grass; and is very difficult to flush; and when on the wing, it merely skims over the surface, and takes a very short flight, dropping, in fact, as soon as possible. After being once put up, it is extremely hard to raise a second time, and it will lie so close as to incur much danger from the foot of the unwary sportsman. In many of its habits it would seem to resemble our Landrail, or Corn-crake, (*Crex pratensis*,) running very swiftly, as its form indicates, being admirably adapted to the tangled localities which it loves to frequent. It is said not to migrate, nor even to remove from the district in which it was bred.

Its food is reported to consist of small seeds and insects. The stomach of the one shot in Oxfordshire contained "two or three husks of barley, several small seeds, similar to charlock, and some particles of gravel."

The possession of habits, such as we have mentioned, must render it a bird of very little interest to the sportsman.

Nothing is known respecting its nest or eggs, but it seems probable that it lays four eggs, and places its nest under the shelter of some tuft of grass, or coarse herbage, as its Australian congener, the Fast-flying Hemipode of Gould, has been ascertained by that gentleman to do.

Not having seen a specimen of this bird, we take the following description from Yarrell, whose accuracy is well known:—"The point of the beak is light brown, the base pale wood brown; irides, hazel; top of the head, dark brown, with a lighter brown streak in the middle, passing backwards; the cheeks, brown, speckled with buff; upper surface of the body, dark brown, with numerous narrow transverse bars of chesnut, black, and buffy white. Tail, grayish brown; wing coverts, yellowish brown, varied by a dark spot placed on the centre of a larger spot of pale yellow brown; primaries, grayish brown, with a light-coloured line along the edge of the outer web; chin, whitish; throat, neck in front, and upper part of the breast, pale chesnut; sides and flanks, yellowish white, with a crescent-shaped mark of rich brown occupying the centre of each feather; lower part of the belly, vent, and under tail coverts, buffy white. Legs and toes, pale brown."

The length is six inches and a half. Expanse of wings, twelve inches.



GREAT BUSTARD.

GREAT BUSTARD.

<i>Otis tarda</i>,	.	.	.	.	.	LINNEUS.
<i>Outarde barbue</i>,	.	.	.	.	.	TEMMINCK.

Otis—A Bustard. *Ous*—An ear, on account of its quick hearing. *Tarda*—Slow or heavy (Quære) in taking wing.

IN the olden time, when modern innovations and modern farming were unknown, the Great Bustard was a tolerably abundant bird on all the large open plains and downs in England. Unlike the Partridge, which multiplies as cultivation increases, the Bustard has gradually faded away as the wild lands have been enclosed, and made useful to man; and to see one of these magnificent birds ornamenting the landscape, is now, alas! an occurrence of extreme rarity. Railways and model farms are now to be found where, in former times, the Bustard was almost the only tenant of the soil; and, although few would perhaps wish to resort again to those times, with all their, in those days unknown and uncared for, inconveniences, still all must regret that this noble bird has been of necessity sacrificed to modern wants and comforts.

The Great Bustard appears to have been very generally distributed over the country; thus there are records of its occurrence in Berkshire, Cambridgeshire, Cornwall, Devonshire, Dorsetshire, Lincolnshire, on Newmarket Heath, in various parts of Norfolk, on Royston Heath, on Salisbury Plain, and other parts of Wiltshire; on the South Downs of Sussex; in Suffolk, and in Yorkshire.

With respect to its occurrence in this country, my brother, the Rev. F. O. Morris, received the following accounts, the first from E. H. Hebden, Esq., of Scarborough; the other from Henry Woodall, Esq., of North Dalton:—Mr. Hebden says, “I think, to the best of my recollection, it would be about the year 1811, that I first saw the five large Bustards on Flixton Wold; that number continued there at least two years, when two of them were shot. The three still continued on the same wold for at least one year, when two of them disappeared, leaving the solitary bird, which, after a length of time, was severely wounded by the gamekeeper of the late Sir William Strickland, and was found some days afterwards in a turnip field near Hunmanby by the huntsman of the Scarborough Harriers, and secured.” Mr. Woodall says of some other Bustards, “All the information I can give you respecting the herd of Bustards is, that in the year 1816,

or 1817, the late James Dowker, Esq., of North Dalton, killed a right and left shot, and also a third one in turnips, on the farm now occupied by myself. A nest was also found forsaken, with only one egg, which is to be seen at the Scarborough Museum. One of these birds was presented to George the Fourth, through Dr. Blomburgh."

One was seen on Salisbury Plain by G. R. Waterhouse, Esq. on August 9th., 1849: it was very shy.

The last Bustard but one, as far as we are aware, which has occurred in England, is in the collection of Dr. Plomley, of Maidstone. The following is his record in the "Zoologist:"—"I have been fortunate enough to obtain that almost extinct bird in England, the Great Bustard, which was shot at Lydd, in Romney Marsh, on January 4th., 1850. The man who shot it, informs me that he had in his garden a wounded Wild Goose, and that the Bustard, (which he supposed to be a Goose also,) had been seen several times, by himself and others, steadily flying over his garden, and that on the morning of January 4th., as he was standing at his back-door, he saw the bird at a distance flying direct to him; he immediately stepped into his house, got his gun, and killed the bird as it was passing over his wounded Goose. I believe this to be the only instance of its being killed in Kent; but from the information I obtained during the many years of my residence in Romney Marsh, I think the Great Bustard was not uncommon formerly in that locality. My specimen is a female, and in beautiful plumage. It measures from the crown of the head to the tip of the tail, two feet six inches and a quarter; across the breast, with the wings closed, ten inches and a half; from the extremity of one wing to the other, when expanded, five feet and a half. The crop contained a quantity of vegetable matter, principally sea-kale."

The occurrence of the Great Bustard in Devonshire, comparatively recently, is thus recorded by John Gatcombe, Esq., of Plymouth, in "The Naturalist" for February, 1852. He says, "On Saturday last I was much interested in examining, at the house of Mr. Drew, Taxidermist, Stonehouse, a fine specimen of the Great Bustard, sent to him, for preservation, by J. G. Newton, Esq., Millaton Bridestow, Devon, with a note stating it was shot some days previously, (on December 31st., 1851.) The bird being perfectly fresh, and Mr. Drew having only just completed the operation of skinning it when I called, I had the opportunity of ascertaining the sex, and examining the contents of its stomach. It proved a female, and the stomach contained a large quantity of turnip leaves, mixed with several flat flinty stones about the size of a sixpence. The base of the feathers on the breast and back were of a beautiful rose-colour."

N. S. Hodson, Esq., of Bury St. Edmunds, writing in Loudon's "Magazine of Natural History," in 1833, says, "This bird formerly was frequently seen at Icklingham, in Suffolk; Brandon Heath, and the open fields of Norfolk; but has not been observed in the first place for some years. The last seen there was a hen Bustard, sitting on six

or seven eggs. She, unfortunately, was disturbed by a farmer, who secured the bird by throwing a casting-net over her; but she pined for a short time and died. Bustards are, however, still occasionally seen in the grounds of the Duke of Grafton, at Easton, and on the heaths between Thetford and Newmarket.

The method which was usually adopted by a sportsman desirous of shooting this shy bird, was to dress his head with boughs, and to walk by the side of a stalking horse, decorated in the same manner, until he arrived within gun-shot. I have never heard that the breed has been domesticated. The late Duke of Queensbury had three pinioned on his lawn at Newmarket; and J. Wastall, Esq. had one pair a long time in his garden, at Risby, in Suffolk. In a wild state, they live on grain and insects, and, (according to Shaw,) on rats and field mice. They breed among the corn in summer, and in autumn form covies or flights of about three or four brace. Their flesh is much esteemed by sportsmen."

In Scotland it seems never to have been abundant, Forfarshire and Morayshire being alone mentioned as having afforded Bustards. In Ireland it has long been extinct.

On the continent the Bustard occurs in many countries. In Germany and Hungary it is abundant, and is by no means rare in France. It occurs rarely in Holland and Sweden. It is also found in Russia, Spain, Italy, and Greece.

In Asia it is found in Astrachan, Syria, and Tartary.

As an article of food the Bustard has always been highly esteemed, but in this country, of late years, it has been so rare, that but few have been able to indulge in the luxury of a Bustard. Yarrell mentions a pair in 1817 or 1818, which were sold in London for twelve guineas. On the continent it is procured more frequently. The flesh is dark coloured.

The situations in which these birds are usually found, are open plains or downs; extensive fields of grain and turnips. It is not found among woods or mountains. It is very shy in its habits, and can with great difficulty be approached, even in countries where it is comparatively abundant, as in Germany and Spain. The Bustard is not, strictly speaking, a migratory bird, but remains in its native district the whole year, unless compelled to move from it by the severity of the weather or the want of food; when induced by such circumstances to change their abode, they are said to do so during the day-time, and consequently on these occasions, from their large and conspicuous size, many are shot or captured by the sportsmen in the districts through which they pass. During the summer time they generally lie close all day, particularly during the breeding season, hiding in the tall wheat or rye. They pass the night in a body, the young ones being in the centre: on such occasions they are very watchful, and are seldom surprised.

The general form of the body of the Bustard is a good deal that of the Goose, and indeed it is said, when lying down, to present much of the appearance of that bird,

which is increased by the length of its neck. In running it carries itself like the barn-door fowl. The Bustard runs with great swiftness, but if approached it is very ready in taking to its wings, and flies swiftly and well, frequently for several miles. Selby says that the young birds, when alarmed, squat close to the ground, like young Plovers and Lapwings, and in this position are often taken by the hand. This would certainly seem to militate against the old accounts of the young birds being coursed by greyhounds. The male bird has a curious pouch, commencing under the tongue and running down the neck, capable of holding, according to Montagu, three or four quarts of water, according to others, six or seven. The use of this receptacle appears to be uncertain; it is said that the bird will eject water forcibly from it in the face of its pursuer, as a means of defence; others suppose it is used to carry a supply of water, to sustain it in the dry and parched localities it prefers. It is, however, very doubtful whether either of these suppositions is correct; the latter is improbable, for the hen is destitute of any such provision.

Meyer says that the scent and hearing of the Bustard are very defective, and that if a person can hide in a ditch, or behind long herbage or brambles, near its haunt, and wait the arrival of a flock, he may readily pick his bird, if he only keeps out of sight. In some interesting notes on the Great Bustard, by Thomas Southwell, Esq., in "The Naturalist," for March, 1852, the following unsportsmanlike destruction of nine of these fine birds is thus narrated:—"The Rev. R. Lubbock, in his "Observations on the Fauna of Norfolk," says that a keeper, by the name of Turner, at Wretham, about six miles from Thetford, some fifty years ago, in severe weather, used to kill many Bustards by looking for their tracks in the snow, and feeding them for a day or two with cabbages. He next constructed a battery of three large Duck-guns, bearing on the spot where the food lay, and secreting himself before daylight in a hole some one hundred and fifty yards from the guns, by means of a long string fastened to the triggers, he effected a general discharge on the first favourable opportunity; and in this way he once obtained nine Bustards at one shot." Mr. Southwell mentions that the last Bustard shot in Norfolk, as far as he has been able to ascertain, was a female, early in 1838, which was obtained in a turnip field at Dersingham, near Lynn.

After incubation commences the males do not associate with the females. During the autumn and winter, they unite together in flocks of from five to fifteen or twenty; but in some parts of the continent, where they are plentiful, from fifty to a hundred or more will sometimes be found collected in one pack.

In feeding the bill is chiefly used to detach the food; the feet being but seldom called into requisition.

The Bustard is said by some to be polygamous, but it does not appear to be known in what proportion the two sexes exist. According to Meyer they pair regularly about

March, severe contests taking place among the males, which are, at this time, much less wary than at other seasons. The male, having left the female during incubation, joins her and her young ones on its completion, and assists in the care of them.

The call-note of the Bustard is said to be only a kind of 'coo,' somewhat like that of a Pigeon.

The food of the Bustard consists chiefly of vegetable substances, such as grasses of various kinds, clover, green corn, cabbages, and other succulent plants; seeds, grain, and insects, in the summer; occasionally also mice, and probably reptiles. The young birds are said to feed exclusively upon insects. Stones and other hard substances are also swallowed. We remember once reading of one, in whose stomach ninety doubloons were found, besides small stones, all well polished and worn; had this been an every day occurrence, the estimation in which they are held by sportsmen would be readily accounted for; the celebrated Goose, which was said to lay golden eggs, would be quite thrown in the shade in a country where Bustards were plentiful.

The nest, or rather the place where the eggs are deposited, is simply a slight hollow or depression in the ground; often in a corn or clover field. Occasionally it would seem that it selected other and very different situations for its nest; thus Daniel states that "In July, 1806, two gentlemen's servants observed near Ringwood Forest, a large Puttock Hawk, suddenly pitch from the air, amongst some furze, and not seeing him rise again, were led by curiosity to examine what kind of prey he had caught; and which was a young Bustard, weighing nearly seven pounds."

The eggs, which are but two in number, are of a yellowish brown colour, slightly marked with a darker shade of the same. They measure nearly three inches in length, by two inches and one-sixth in breadth.

In four weeks the eggs are hatched, but it is said to be some time before the young are able to run much. If disturbed at this time, the female displays her maternal solicitude by shuffling along the ground as if wounded, so as to allure the intruder from the vicinity of her young, who instantly hide themselves as well as they can, by squatting close to the ground: having decoyed her dupe to a safe distance, she soon uses her wings, and makes off, to return to her brood as soon as all is again safe. During the period of incubation, the female loses much of her watchful shyness, and on one occasion some years back, one actually suffered herself to be taken in a casting-net, which a farmer threw over her.

From several accounts it would appear that this magnificent bird is, without much difficulty, domesticated; but we are not aware that it has ever bred in confinement. It is greatly to be desired that some systematic attempts should be made to enlist this valuable bird among our domesticated animals; if not, it must in time become almost, if not quite, extinct in most of the countries where it is now found in plenty; just as

it has gradually diminished in England before agricultural improvements, and the detonating fowling-pieces now in such general use.

We do not remember ever to have seen records of any variation in the plumage of the Bustard, from that which it commonly exhibits; but it is not impossible that such varieties may occasionally occur.

The adult male has the bill grayish white; irides, hazel. Head and neck, ash-coloured; having a streak of black running over the crown of the head to the nape. A tuft of wiry-fringed feathers springs from the chin, running backwards and downwards. On the front of the neck is a long narrow patch of naked skin, of a bluish gray colour, lying over the throat pouch. The upper parts are of an ochre yellow or pale reddish brown, barred with black; primaries, black with white shafts; secondaries, tertials, and bastard wing, white; greater coverts, white. Upper part of the breast, pale red orange; lower breast, abdomen, vent, and under tail coverts, white. Tail feathers, ochre yellow with white edges and tips, and with one or two black bars; tail, often elevated and spread like a fan. Legs and feet, dusky black.

The female resembles the male, but is destitute of the fringed whiskers; and also wants the throat pouch. The male in winter resembles the female.

The young at a month old, says Mr. Selby, are covered with a buff-coloured down, barred upon the back, wings, and sides, with black.

The weight of the adult male is from twenty-five to thirty pounds; the female is considerably less.

The male measures in length about three feet eight or ten inches; the female about three feet.



LITTLE BUSTARD.

LITTLE BUSTARD.

<i>Otis tetrax</i>,	.	.	.	.	.	LINNÆUS.
<i>Otis minor</i>,	.	.	.	.	.	RAY.
<i>Outarde Canepetière</i>,	.	.	.	.	.	TEMMINCK.

Otis—A Bustard, from *Ous*—an ear, on account of its quick hearing. *Tetrax*. (Quære,) *Teter*—Dark.

THIS very handsome bird, which is a very rare occasional visitor to this country, has generally been obtained in the late autumn and winter months. Although occurring very rarely, it has been obtained in many widely-separated counties; thus it has occurred in Cambridgeshire, and in Cornwall, several times. Mr. E. H. Rodd, of Penzance, thus records in the "Zoologist," the occurrence of two recent specimens in the latter county:—"A female bird in excellent condition, of this interesting species, was brought to me for my inspection about a fortnight since, and which had been brought in by a farmer from the Land's End district, with some other birds; its value as a rare British bird was of course unknown, and it was only accidentally observed hanging in the lobby of one of our hotels with other game, and supposed to be 'a sort of mottled pheasant;' weight, one pound and three-quarters. Previous to its capture we had a tremendous gale from the south, which, no doubt, drove the bird from the part of the continent where it is known to exist plentifully.—November 22nd., 1853.

Another specimen of the Little Bustard I observed to-day hanging up in a poulterer's shop in this place, (Penzance,) and purchased it for half-a-crown. I was told at the time that another had been offered last evening, and four or five killed in the neighbourhood. The wind has been from south-east to south for some days, and the bird has been shot for some days.—December 22nd., 1853."

In Devonshire, four times, the last on November 15th., 1839; in Essex, three times; in Hampshire, once at Heron Court; in Kent, at Chatham, in January, 1834; in Norfolk many times; in Northumberland, twice; in Oxfordshire, on Denton Common in December, 1833; in Suffolk; in Warwickshire, two near Birmingham in October, 1839; in Yorkshire, on Sledmere Wold, early in 1839; and again on the 19th. of January of the present year, (1854,) a female was shot by the Rev. W. Blow, of Goodmanham, near Market Weighton, and was mounted by Mr. D. Graham, of York.

In Scotland one only has occurred; it was killed near Montrose, in December, 1833.

In Ireland a pair were seen in the county of Wicklow on the 23rd. of August, 1833, one of which was shot.

Abroad it is distributed over various countries. In Germany it is said to be rare. It occurs in Greece, Southern France, Italy, Provence, the southern parts of Russia, Sardinia, Spain, Sweden very rarely, and in Turkey. It is also found in Tartary, and in the north of Africa.

As a bird for the table, the Little Bustard is said to be superior to almost any of our game birds.

In its habits it would appear to resemble the Great Bustard generally. It frequents open champaign country, and seems to be as independent of water as its congener. It avoids mountains and woods; and shelters itself from observation in fields of grain, turnips, or the like. It flies well and strongly, and with considerable swiftness; and, if disturbed, takes wing readily, skimming over the surface of the ground for a short distance, when it alights; and instead of remaining where it pitches, it instantly runs off in a straight line to a considerable distance with great rapidity, and by this means puzzles its pursuer, who probably expected to flush it again near to where it alighted: a knowledge of this habit is indispensably necessary to insure success in the pursuit of this bird. In its mode of running, and general appearance, it resembles the Great Bustard.

The Little Bustard is said to be polygamous.

With respect to the note, Meyer says that of the male bird resembles "the syllable 'proot, proot,' which is more frequently uttered during the night; the nestlings and young chirp like chickens."

The food of the Little Bustard, during the winter, when, as before observed, they usually occur in England, consists of vegetable substances. The stomach of one, killed February 1st., 1823, near Twizell, in Northumberland, and examined by Mr. Selby, contained a quantity of stems of clover and grasses, with numerous seeds of the cow-parsnip, (*Heracleum Sphondylium*,) and of other umbelliferous plants. No stones or gravel were found in the stomach. It is also known to feed upon grain, cabbages, turnips, young corn, and other succulent herbs; also, during summer, very largely, if not chiefly, upon insects, worms, caterpillars, ants, and grasshoppers. The stomach of one, killed in January, 1823, was found by Mr. Yarrell to contain parts of the leaves of the white turnip, lungwort, (*Pulmonaria officinalis*,) dandelion, (*Leontodon taraxacum*,) and a few blades of grass.

No nest is made, but the eggs are deposited in a hollow upon the bare ground, generally under some plant or herb, which will sufficiently hide the old bird and eggs from casual observation. The eggs vary in number from three to five, and are generally of a uniform brown olive colour; but Yarrell states that he has seen them slightly clouded

with patches of a darker brown. They measure two inches in length by one inch and a half in breadth.

The breeding plumage of the adult male is as follows:—"The beak, brown; the irides, golden yellow; the top of the head, pale chesnut, mottled with black; cheeks, ear coverts, the front and sides of the neck, bluish gray, bounded inferiorly by a border of black passing to the back of the neck; below this a narrow white ring all round the neck, and below this a broad collar of black, with a gorget of white, and another of black at the bottom of the neck in front. Shoulders, back, scapulars, tertials, and upper tail coverts, pale chesnut brown, streaked irregularly with numerous narrow lines of black; all the wing coverts, and the base of the primaries, white; the distal half of the primaries, grayish black; the secondaries patched with black and white; the base of the tail feathers, white, the ends mottled with black and buffy white, crossed with two narrow bars of black, the extreme tips white. The breast, and all the under surface of the body, white; legs, toes, and claws, clay brown."

"The males that are killed in the winter half-year, have the feathers of the neck of a pale chesnut, streaked with black, like the same part in the female, which does not change with the season."

"The adult female has the head and neck mottled and streaked with black on a ground of pale chesnut; the chin, white; the neck below without any appearance of transverse bars at any season. The wing coverts have less white than those of the males; the white feathers on the breast, sides, and flanks, are marked with short transverse bars of black. Females in other respects resemble the males."—Yarrell.

The weight of the male is about one pound fourteen ounces; the female about the same.

The length of one shot on Berry Down, in the parish of Lanreath, Cornwall, on September 23rd., 1831, is stated by Mr. J. Couch, to have been eighteen inches from the bill to the tail, and nineteen inches and a half from the bill to the toes. The expanse of the wings was two feet eleven inches.

RUFFED BUSTARD—Macqueen's Bustard, (*Otis Macqueenii*.)

THIS very handsome bird has occurred but once in this country, or, as far as we are aware, in Europe. Its natural habitat appears to be the extensive plains of Central Asia. The specimen referred to was shot by Mr. George Hansley, at Kirton Lindsey, in Lincolnshire, on the 7th. of October, 1847, and fell into the hands of Mr. Alfred Roberts, then of Brigg, but now of Scarborough; it then came into the possession of E. T. Higgins, Esq., of York, and is now in the Rudston collection of British Birds, in the Museum of the Yorkshire Philosophical Society.

We do not give a figure of this bird, as from its extreme rarity, and extra European

habitat, the chances are but small that it will again be obtained in this country. For a correct figure, taken from the bird itself, we refer to the "British Birds," by the Rev. F. O. Morris; and also to "The Naturalist," volume ii., page 89, where an excellent coloured figure of it is given.

The bill is dark lead-colour, compressed at the tip, depressed at the base; irides, yellow; the head and throat, rufous, mottled with black, with long loose feathers of a slate-colour hanging over the breast. Chin, white; back of the neck, white, minutely mottled with brown; the sides of the neck are ornamented with a range of feathers two inches long, about two-thirds of the upper portion black, the lower part white. The back and wing coverts, rufous, mottled with black, with zigzag bars of black across; the quill feathers black, extending to the end of the tail when closed; under parts, white. Legs, greenish yellow.

Weight, thirty-six ounces.

Length, twenty-three inches; expanse of wings, three feet eight inches.



GREAT PLOVER.

GREAT PLOVER.

NORFOLK PLOVER. STONE CURLEW. THICK-KNEED BUSTARD.

<i>Ædicnemus crepitans</i> ,	.	.	.	SELBY.
<i>Charadrius ædicnemus</i> ,	.	.	.	LINNÆUS.
<i>Otis ædicnemus</i> ,	.	.	.	PENNANT.
<i>Ædicneme criard</i> ,	.	.	.	TEMMINCK.

Ædicnemus, from *Oideo*—To swell, and *Kneme*—A leg. *Crepitans*—Creaking.

THIS fine bird, which would appear to form a connecting link between the Bustards and true Plovers, is found pretty widely and by no means unfrequently distributed over this country. Being a migratory bird, arriving in this country in the spring, breeding with us, and again leaving in the autumn, it is not probable that it will ever become extinct; for its haunts are little calculated for the plough of the husbandman; and we may therefore look upon the Great Plover as being little likely to meet with the fate of the Great Bustard, and many other birds once common in this country.

In England, it is very generally distributed, as will be seen from the following list of localities. It occurs commonly in Cambridgeshire; several have been procured in Cornwall, and it is also said to winter there. In Devonshire it is not common; in Dorsetshire it occurs frequently; at least we can speak for the south-western part of the county. Essex, Hampshire, Kent, also possess it in tolerable numbers: in Lancashire it is rare. It is not uncommon in Lincolnshire; is very plentiful in Norfolk, as one of its trivial names implies; Suffolk and Sussex are also well supplied with it. In Worcestershire it sometimes occurs, and is not very uncommon in Yorkshire.

In Ireland it is very rare, having only been recognised about half a dozen times. One was shot in the county of Clare in the autumn of 1844; another at Clontarf, near Dublin, on January 27th., 1829. Two were seen on the Iveragh mountains in Kerry, in August, 1842; another was shot near Brownstown, in the county of Waterford, in March, 1840; and the last was shot near Wexford, on December 4th., 1844.

In Scotland it has not yet been seen.

Out of this country, it occurs in more or less abundance in France, Germany, the

Greek Islands, Italy, Provence, Sardinia, Spain, and Turkey; also in Asia Minor, and between the Black and Caspian Seas; in Africa, even to the Cape of Good Hope, and in Madeira.

The localities frequented by these birds are wide open downs, warrens, or large fallow fields, where it can hardly be surprised. We ourselves have found it not uncommonly on the open unenclosed tops of several of the hills in the neighbourhood of Charmouth, Dorsetshire; on these it breeds regularly every year, and we have many a time attempted, unsuccessfully, to shoot it. We never met with it except during the summer months. We first made its acquaintance, certainly only a distant one, on the top of the hill behind Langmoor, near Charmouth; there it used to frequent a very large rough field, much covered with stones; it invariably kept near the middle of this field, and if any person entered it at any point, it would instantly take wing. We never succeeded in seeing it on the ground; and we certainly considered it the most wary bird we ever tried to have anything to do with.

On one occasion, a farmer shot one on the top of a hill about a mile and a half distant from the above-named locality; having picked it up and handled it, he threw it, apparently dead, upon the ground, while he re-loaded his gun: before, however, he had time to accomplish this, the bird was off, apparently as well as ever; and he never had another chance of getting near it. Whether the bird was feigning death, or merely recovered itself, we do not say.

The males assist in incubation, as was proved by Mr. J. D. Salmon, and recorded in "Loudon's Magazine of Natural History." He says "It is generally supposed that the males take no part in the labour of incubation; this, I suspect, is not the case. Wishing to procure for a friend a few specimens in their breeding plumage, I employed a boy to take them for me. This he did by ensnaring them on the nest; and the result was that all those he caught during the day proved, upon dissection, to be males." These birds feed during the night, and like other birds with similar habits, have very large, beautiful, and prominent eyes.

The Great Plover is usually considered to be entirely migratory, yet it is certain that some do remain in suitable mild districts throughout the year. In Cornwall, Mr. Rodd has only procured them during the winter; and in Ireland, most of those recorded occurred during the autumn or winter months. Mr. Salmon also mentions that near Thetford, in Norfolk, he started one in 1834, as late as the 9th. of December. There can be no doubt, however, that the great bulk are merely summer visitors, arriving about the middle of March, and leaving us by October, taking along with them the young broods which they had reared.

It seems to require but little water, like the Bustards; for on the situations it affects, it can scarcely obtain any, unless from the dew-drops on the scanty herbage. In Dor-

setshire we never remember seeing one of these birds anywhere in the valleys below its usual haunts.

Of this bird Mr. Thompson says, "A Great Plover in the garden of the Zoological Society, Regent's Park, London, interested me much during different visits in May, 1849, by remaining fixed as a statue, so long as I had patience to return its gaze, in whatever attitude it happened to be when my eye first rested on its organ of vision. I tried from the different sides of the aviary, and found its performance the same from all. The earnestly fixed gaze of its large and prominent dark eye had a very singular effect."

The Great Plover is monogamous; with the time of pairing we are unacquainted, but it is probably early, as incubation commences before May.

The note of the Great Plover, which is very peculiar, is a kind of shrill whistle, and has been compared to the noise made by the creaking of a winch-handle, or axle of a wheelbarrow which wanted oiling; this may be considered a fanciful comparison, but there is certainly much similarity between the sounds produced by those engines and the Thick-knee. The note is repeated several times in succession, and has been syllabled by the word 'turrlui, turrlui, turrlui.' The specific name, *crepitans*, would appear to have been not inappropriately applied to this bird in consequence of its discordant note.

The food of the Thick-knee consists of insects of all kinds, particularly beetles, many of which are to be found during the day under the stones among which these birds live; at night they come out, and fall a prey to the sharp-eyed Plover. They also feed on slugs, worms, and, it is said, small reptiles and animals, such as frogs and field-mice.

Incubation commences about the middle of April.

The female makes no nest, but lays her eggs on the bare ground, and usually among stones, which afford an admirable shelter from observation, so closely do these birds, eggs, and young resemble them in colour.

The eggs are two in number, of a "pale clay brown, blotched, spotted, and streaked with ash blue and dark brown." They measure in length two inches and two lines; and in breadth one inch and seven lines. The female takes no precaution to hide her eggs or young, farther than by the careful selection of a suitable place for incubation, where the natural colour of the ground, as just stated, gives them almost complete security.

The adult male has the bill black at the point, the base greenish yellow; irides, yellow. Top of the head and back of neck, pale yellowish brown, each feather streaked in the centre with umber brown: a light-coloured streak runs under the eye from the upper mandible to the ear coverts; beneath this streak is another of brown. The back and upper tail coverts, the wing coverts and tertials are reddish ash-colour, each feather having a central longitudinal streak of umber brown. Primaries, purplish black; the

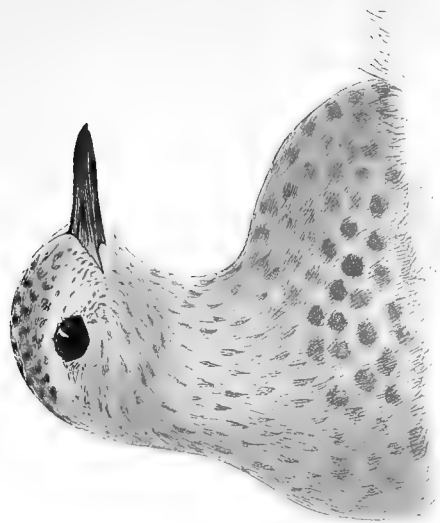
two first have a large patch of yellowish white an inch and a half from the tips; secondaries, also purplish black. Chin and upper part of neck, white; lower neck, breast, abdomen, and flanks, yellowish white, the shaft of each feather streaked with umber brown. Vent and under tail coverts, ochreous; the tail has the feathers black at the tips, above which is a bar of white, while the upper halves are yellowish brown, with darker markings. Legs and toes, greenish yellow; claws, black brown.

The female does not differ materially from the male.

The young birds are somewhat lighter coloured, and the markings are not so decided as in the adult.

The length of the Great Plover is sixteen to seventeen inches.

The plate is taken from a drawing from a recent specimen by John Gatcombe, Esq., of Wyndham Place, Plymouth.



GOLDEN PLOVER.

GREEN PLOVER. YELLOW PLOVER.

<i>Charadrius pluvialis</i>,	.	.	.	.	.	LINNÆUS.
<i>Squatarola pluvialis</i>,	.	.	.	.	.	SELBY.
<i>Pluvier doré</i>,	.	.	.	.	.	TEMMINCK.

Charadrius. *Charadra*—A furrow or chasm, from its frequenting such places. *Pluvialis*—Rainy, or denoting rain.

THIS handsome bird is one of the most generally known and esteemed of the true Plovers; being a permanent resident, it becomes extensively known from its frequenting different districts in winter, and in the breeding-season; and in suitable localities is everywhere abundant, particularly in wild districts where it has ample opportunities for nidification and procuring food. They are, we believe, pretty generally distributed over the country; we have met with them on the wild moor-land in the south-west of Dorset; they occur also in various other parts of the south of England—in Somersetshire and Oxfordshire, but become more numerous to the north, occurring in Yorkshire and the neighbouring counties in tolerable abundance, and are by no means uncommon in the York market.

Mr. Goatley, of Chipping Norton, states that “these birds come in considerable flocks, in November or December, and spend some time during the winter months upon the higher grounds in the neighbourhood, particularly the fields of Chadlington and Dean, between this town and Charlbury, and leave again early in spring;” and it is mentioned by Mr. Briggs, of Melbourne, in Derbyshire, that he has seen a few in his district in August, September, and February, but that they only stay a few days, being apparently on their migration, and merely remaining to recruit their strength. They are not very shy, and visit the margins of the Trent, “frequenting the shallows, where they may be seen running lightly along the shore, to pick up insects amongst the pebbles, and wading knee-deep in the river, occasionally upturning a stone for the food beneath.”

In Scotland and the Hebrides it is extremely abundant. It is also of frequent occurrence in Sutherland, and in the Orkneys and Shetland.

In Ireland it is common over the whole country, and breeds in all the retired bogs, according to Mr. Thompson; and we remember it as having been very plentiful in the Dublin market every winter for several years during our residence in that city. In some parts of Ireland, and probably elsewhere also, this bird, in its winter plumage, is called by sportsmen the "Gray Plover."

It is found in France, Italy, Sardinia, Norway, Sweden, Lapland, Iceland, and the Ferroe Islands.

A very similar bird is also found inhabiting North America and the Asiatic continent, but this is now proved to be a distinct species from the European bird, the Golden Plover having the axillary feathers, (which line the under part of the wing,) pure white, while the American bird has them hair brown, and the Gray Plover black.

The Golden Plover is an exceedingly good bird for the table, and is held in very general estimation, bringing a good price in the market. It should be dressed with the trail in, as Snipe and Woodcock.

During the spring and early summer these birds are found in pairs, distributed on high boggy and swampy ground, over the whole of Ireland and Scotland, but in England chiefly in the north. During this season it may be readily approached, and will often be heard uttering its plaintive cry from the top of some little eminence at no great distance from you. At other times, Mr. Thompson remarks that "there is a wild life in its cry which is quite inspiring."—

"And in the Plover's shrilly strain,
The signal whistle's heard again."

LADY OF THE LAKE, 5, xi.

He also very justly observes that this couplet, which has been appropriated to the Great Plover by Mr. Williamson, as quoted by Yarrell, should be more suitably given to this bird: the Great Plover not occurring in Scotland, while the Golden Plover is abundant and well known.

The note here referred to is a shrill whistle, heard to a remarkably long distance; and which might well startle the lone traveller over its retired haunts; Meyer compares it to the syllable 'tluwee,' "uttered at a high pitch, and considerably loud."

Immediately after the breeding-season, they associate together in small flocks of twenty to forty; and as the autumn advances, they collect in larger flocks, and migrate to the south and to the sea-shores, where they pass the winter. During this season we have, as we before stated, in Dorsetshire, observed them to frequent the extensive peaty commons on the tops of the hills about Charmouth; and in that district we never saw them on the sea-shore. In many suitable localities, however, they visit the shores in large numbers. Mr. Thompson states that they are met with on the shores of Belfast Bay from as early

a date as the latter end of August, in flocks of from one hundred and fifty to two hundred birds; and he mentions that on one occasion, in the month of January, a wild-fowl shooter killed at one discharge of a swivel-gun no less than one hundred and eight Golden Plovers; besides a number more that were afterwards picked up by other persons.

The following account of their habits is given by Mr. Poole, living in the county of Wexford, as quoted by Mr. Thompson:—"The Golden Plover is an irregular winter visitant to the lowlands, coming only when hard frost compels it to leave its highland haunts. When undisturbed, these birds always arrange themselves in flight in the form of a triangle; but if frightened they desert that order, and fly a long way (in single file) without joining again. In feeding on fallow ground, they prefer the furrows to the tops of the ridges, and thus unconsciously form themselves into rank, resembling an army drawn up in order of battle. They are tame birds, and when unaccompanied by Lapwings, easily approached. Some birds, shot in the evening, had their stomachs distended with earth-worms, on which and beetles they feed."

These Plovers have a curious habit, when shot at, of throwing themselves suddenly down nearly to the ground; and it is said that if a gunner sees a flock of them high above him, he has only, if he has a double gun, to fire one barrel, which will have the effect of bringing them, very probably, within shot of the remaining barrel. During the winter they may be not unfrequently found associated with the Common Lapwing. Mr. St. John remarks how well these birds seem to calculate time; for when in winter they are obtaining their food upon the sea-shore, they are, (speaking of Sutherlandshire,) when the tide is up, obliged to take to the land; and although their chosen resort is, on these occasions, fully five miles inland, they never fail to make their appearance on the shore, as soon as ever it is sufficiently uncovered to admit of their procuring food.

The food of the Golden Plover consists of earth-worms in large numbers, small snails, slugs, beetles, and other insects, together with some vegetable substances. When they resort to the sea-shore, their food is of course very different; and Mr. Thompson has found their stomachs on these occasions distended with small testaceous mollusca of the genera *Rissoa*, *Littorina*, and *Lacuna*, together with the fry of the common mussel, (*Mytilus edulis*.)

Early in the spring, but depending in great measure on the state of the weather, they pair, and betake themselves to the wild moors and mountain sides for the important task of nesting. The nest is merely a slight hollow in the ground, with a few dry blades of grass in it. In this, at the end of May or early in June, the female lays four eggs, which have a ground colour of pale cinereous olive, blotched and spotted with brownish black. They are very large for the size of the bird, measuring in length two inches by one inch and four lines in breadth. They are more pointed than those of the Lapwing.

They breed but once in the season.

The young, which run as soon as hatched, are prettily marked with yellow and brown. If suddenly frightened from her nest, the female generally runs some distance before taking wing. When she has young she is very adroit in leading intruders from the vicinity of her brood, limping off as with an injured wing or leg, till she thinks her progeny are safe, when she flies off, to return to them when the coast is clear.

Incubation is performed by the female alone, and is completed in seventeen days.

The adult male in the breeding-season has the bill dusky black; irides, brown; forehead and a streak above the eyes, pure white. On the nape the feathers are black, with the margins golden yellow; upper parts, deep black, the margin of each feather being spotted with golden yellow. Primaries, clove brown, with the shafts white; tertials, nearly black, with golden margins and tips; sides of neck, white, with spots of black and yellow. Throat, front of neck, breast, and abdomen, pure black; axillary feathers, white; tail feathers, brown, lighter at the edges, with darker markings. Legs and feet, dark gray, or lead-colour.

In the winter the upper parts are of a browner black, with a greater proportion of yellow than in summer. The under parts lose their black tint, and the cheeks, sides of neck, and breast are ashy brown, with a shade of yellow over them. Throat, belly, and vent, white. In other respects as in summer.

The adult birds of both sexes have their plumage nearly alike at the same season of the year; but young birds, during their first autumn, have the breast much darker in colour than the same part of the old birds in winter, and throughout their first winter may be easily distinguished from the parent birds by the greater proportion of dusky gray on the breast and belly.

The length is ten and a half to eleven inches. The beak measures one inch.

GRAY PLOVER, (*Squatarola cinerea*.) Cuvier.

THIS bird is an autumn and winter visitor only to our shores, seldom remaining longer than the month of March; occasional lingerers have now and then been found as late as June: these, however, are rare exceptions. Small parties of the Gray Plover migrate to this country about the end of September or during October. It is very generally distributed round the shores of these islands; though it can nowhere be said to be abundant. On the continent it is found in the northern parts of Russia and Siberia; on the shores of the Baltic, in Holland, France, Italy, and Spain. It is also recorded as occurring in Java, China, Egypt, and South Africa. In North America it, or a closely allied species, occurs in many places, extending even to the Arctic circle.

As an article of food, the Gray Plover is generally considered to be much inferior to

the Golden Plover, and may be purchased in the market for a considerably smaller sum.

In its habits, as exhibited in this country, the Gray Plover assimilates much more closely to the little Plovers, than to the Golden Plover. It not only seeks its food entirely on the sea-shores, being very rarely found inland, but even when the tide advances, it will not leave the shore farther than is necessary to ensure it a comfortable standing-place, until it can again return to its feeding ground. In this country it is never seen in large flocks; two or three, or at most a dozen or twenty, being the usual number seen: it seldom mixes with birds of other species. It is so extremely watchful and suspicious that it is only obtainable with great difficulty; and even if tolerably common in any locality, it may be some time before one can be shot; during the night it seems to put on a double amount of wariness, and at that time it is almost impossible to get near it. Flat, sandy, and muddy shores are those most frequented by this bird. Its chief feeding times are early in the morning and late in the evening; but it probably also feeds much during the night, like the other Plovers, and for doing which its large eye would seem specially adapted. In America during the spring and summer, they frequent fields remote from the sea. Wilson says "It generally makes its first appearance in Pennsylvania late in April, frequents the countries towards the mountains, seems particularly attached to newly-ploughed fields, where it forms its nest of a few slight materials, as slightly put together. About the beginning of September they descend with their young to the sea-coast, and associate with the numerous multitudes then returning from their breeding-places in the north. At this season they abound on the plains of Long Island."

Its note is a loud whistle; according to Thompson, a double whistle.

The food consists, when inland, of insects of all kinds, worms, and various berries, particularly those of the *Vaccinia*, and allied species. When feeding on the shores, as in this country, it lives on marine insects, small crustacea, various small marine mollusca, sea-worms, and a small quantity of some sea-weeds.

Its nest, according to Wilson, is placed on the ground, often in newly-ploughed fields, and is very simple in its structure and materials.

It lays four eggs, having a ground colour of light olive, dashed with black. They are large for the size of the bird.

The adult male in summer has the bill black; forehead and streak over the eyes, white. Between the bill and the eye, the ear coverts, sides of the neck, breast, and belly, black; thighs, vent, and under tail coverts, white. Feathers of top of head and nape, hair brown, with lighter edges; back and scapulars, black, or deep brown, nearly black, each feather edged with white. Primaries, brownish black with white shafts; axillary feathers, black; tail coverts, white with brown bars; tail, of twelve feathers, white, with blackish bars. Legs and feet, dark lead-colour.

In the winter, the forehead is white; the top of the head and upper parts are hair brown, each feather having its margin spotted with gray and yellowish spots; upper tail coverts, white. Tail, white, with brown bars; chin and throat, white; neck and ear coverts, white, with a brown streak on each shaft. Breast and upper part of belly and flanks, white, spotted with hair brown. Belly, thighs, and vent, white.

The female is like the male.

Weight, about seven ounces.

The length is twelve inches. Expanse of wings, two feet.



DOTTEREL.

DOTTEREL.

DOTTEREL PLOVER. DOTTREL.

<i>Charadrius morinellus</i>,	.	.	.	.	.	LINNÆUS.
<i>Pluvier guignard</i>,	.	.	.	.	.	TEMMINCK.

Charadrius. From *Charadra*—A furrow or chasm, from its frequenting such places. *Morinellus*.
 Diminutive from *Moraino*—To act foolishly.

THE Dotterel, coming to this country merely for the purpose of incubation, is only seen during the spring and summer months, leaving us again in the autumn; and as it breeds nowhere except in Scotland and the extreme north of England, it can only be looked upon as a passing visitor in the more southern counties. It is more plentiful in the eastern than in the western counties; thus we find it in spring and autumn passing through Berkshire, Cambridgeshire, Hertfordshire, Norfolk, Suffolk, and Wiltshire in small flocks; while in Dorsetshire, Devon, and Cornwall, they only occur, and very rarely, as isolated individuals, which have probably been driven out of their proper course by heavy gales of wind. It is however reported to breed occasionally on the high range of the Mendip Hills in Somersetshire. Passing on to the north we find it in the shires of Lincoln, Derby, and York; and breeding in Lancashire, Westmorland, and Cumberland. In Scotland it is only a passing visitor in the lowlands, but breeds on many of the lofty hills in that alpine country. Mr. C. St. John, speaking of Sutherlandshire, says it is rare, but that it breeds on Cleebriek: he also mentions the singular fact that although on any given hill you may find thousands of the Golden Plover breeding, you will only find one pair of Dotterels. In Ireland the Dotterel is very rarely met with. Mr. Thompson records several instances of its occurrence, only one of which was during its spring migration; one however occurred near Clonmell on Sliev-na-mon mountain on the 24th. of June, 1835, and was shot by Mr. R. Davis, Jun., of Clonmell, in company with Golden Plovers. The others occurred in August or September.

Having succeeded in rearing their young, they pass to the southward during the month of September, and are again seen in most of the places which they visited in the spring, before they finally leave our shores for their winter retreat: where they betake themselves

during that season, seems not to be satisfactorily known, but it is probably far to the south. Yarrell says that some few winter in the south of Italy, Sicily, and the Levant. They breed in all the northern countries of Europe and Asia; in France, they are only passing visitors going to the north in the spring, and returning south in the autumn.

The Dotterel is greatly esteemed by epicures for the delicacy of its flesh, and meets a ready sale whenever it is brought into the market.

The habits of the Dotterel lead them to select the higher parts of the most lofty mountains for the purpose of incubation; and Mr. St. John says that only a single pair will be found breeding on each hill. Mr. Heysham, of Carlisle, states that they chiefly select those hills that are covered with the woolly fringe moss, (*Trichostomum lanuginosum*, Hedw.) This gentleman has had good opportunities of studying the habits of these birds, and has written at some length upon them. His observations show that, in the neighbourhood of Carlisle, they are by no means solitary in their disposition in the breeding-season, but that several pairs associate together in the greatest harmony at these times. They appear to be very careless of the approach of man. Mr. Heysham says, "On the 3rd. of July we found three or four pairs near the most elevated part of this mountain, (Robinson;) and on all our visits thither, whether early in the morning or late in the afternoon, the greater part were always seen near the same place, sitting on the ground. When first discovered, they permitted us to approach within a short distance, without showing any symptoms of alarm; and frequently afterwards, when within a few paces, watching their movements, some would move slowly about and pick up an insect, others would remain motionless, now and then stretching out their wings, and a few would occasionally toy with each other, at the same time uttering a few low notes, which had some resemblance to those of the Common Linnet. In short, they appeared to be so very indifferent with regard to our presence, that at last my assistant could not avoid exclaiming, "what stupid birds these are!" The female that had young, nevertheless, evinced considerable anxiety for their safety, whenever we came near the place where they were concealed, and as long as we remained in the vicinity, constantly flew to and fro above us, uttering her note of alarm." "One, on quitting them, (the eggs,) immediately spread out its wings and tail, which it trailed on the ground a short distance, and then went away without uttering a single note." Mr. H. says that they vary much in the time of commencing incubation, old females sometimes beginning to lay as early as the 26th. of May; while a perfect egg has been taken out of a female, shot on Robinson, as late as July 19th. The middle of June is however the most usual time.

The Dotterel is very fond of dusting itself, and will frequently do this even while a spectator is within a few yards of it.

The singular tameness, or stupidity as it has been called, of the Dotterel in the presence of man, and its habit of stretching out a leg, or wing, probably led to the

old fable that it imitated the actions of any person approaching it; thus it used to be said that when the fowler raised an arm it raised a wing; if he elevated a leg, it did the same, and was so intent on watching his actions as to allow him to advance till he was able to secure it in his net.

In former times the Dotterel used to be captured in nets; Daniel, quoting from Willoughby, says "six or seven persons go in company: when they have found the birds, they set their net in an advantageous place, and each of them holding a stone in either hand, get behind the birds, and striking the stones often one against another, rouse them from their natural sluggishness, and by degrees drive them into the net." This practice is however now entirely abandoned, at least in this country; the deadly fowling-piece affording a much readier and more effective method of destruction.

As may be inferred from the above, Dotterels are monogamous.

The food consists of insects, chiefly small beetles, caterpillars, worms, small snails, and grasshoppers.

No nest is made, but the eggs are deposited "in a small cavity on dry ground covered with vegetation, and generally near a moderate-sized stone or fragment of rock." The eggs, usually three in number, are yellowish olive colour, blotched and spotted with dark brownish black.

Incubation is believed to continue for eighteen or twenty days; and the males assist the females in their arduous, yet pleasing labour.

The Dotterel is readily tamed, but it is said not to live long in confinement.

The adult male, in summer plumage, has the bill black; irides, brown. Top of the head and nape, rich brown. Over the eye, running backwards and downwards, is a band of pure white. Chin and sides of upper neck, white; ear coverts, back of neck, and back, ash-coloured; scapulars, wing coverts, and tertials, grayish brown, edged with pale orange brown. Primaries, hair brown, or ash gray, the shaft of the first white; front and sides of lower neck, ash-colour; below this is a white gorget, surrounded by a dark line; below this the breast, belly, and sides shade gradually into rich brownish orange, the centre of the belly being black. Vent and under tail coverts, white tinged with rufous; tail feathers ashy brown, becoming darker towards the ends, the tips white; the three outside feathers have large tips of white; legs and feet, olive; claws, black.

The winter plumage would seem, from specimens obtained early in the spring, before the breeding dress was assumed, to have the breast and belly nearly white, and the colour on the head less deep.

In length the Dotterel measures nine inches and a half.

RING DOTTEREL—Ringed Plover, (*Charadrius hiaticula*.) Linnæus.

EVERY person who has at any time occupied himself in shore-shooting, and who that has lived at the sea-side has not done so, must be familiar with this very pretty and lively little bird. It is very generally distributed round all our shores; wherever any sand or shingle is left exposed by the retiring tide, there will this active little bird be found foraging for food at the very edge of the water.

Out of this country it occurs all over the shores of Northern Europe, and also Northern America, and it is said to extend southwards as far as Asia Minor.

The Ring Dotterel is resident with us throughout the whole year, but as the winter draws on, a large accession to their numbers is received from the more northern and inhospitable shores which they had sought for the purpose of incubation. Their migrations are performed during the night.

Although their habits are maritime, yet they will not unfrequently ascend some of our rivers for considerable distances, for the purpose of incubation; sometimes as far as twenty miles from the sea. They also frequent the extensive warrens of Norfolk and Suffolk for the same purpose. In seeking its food, the Ring Dotterel runs along the margin of the water very quickly, with its head and neck stretched forwards. It turns sharply to either side, picking up little crustacea, and other marine insects. It flies very quickly; on being disturbed, it will fly a short distance seaward, returning again to the land, and settling, probably within a couple of hundred yards of the point from which it started. It is very fond of associating with the large flocks of Dunlins, (*Tringa variabilis*,) which frequent the same localities; and a Ring Dotterel not unfrequently falls to the gun directed among a flock of Dunlins. They also unite together in small flocks, but very frequently may be found in smaller numbers. In the spring they congregate into large flocks, preparatory to migration.

They are monogamous, and during the time of breeding are found more scattered in single pairs than at other times.

Their note is pleasing, though monotonous; the call-note has been syllabled by Meyer, by the word 'trull,' 'trull,' 'trull;' and their cry, when alarmed, by the word 'truwee.' As we have before remarked, it is by no means easy to convey by letters a correct idea of the note of any bird. It must be heard to enable any one to recognise it.

The food of this little Plover consists of minute crustacea, and other marine insects; of small shelled-mollusca, and probably insects of all kinds that come within its ken. When frequenting the banks of rivers, inland lakes, or ponds, its food probably consists of the minute beetles so common in such situations, and some of the fresh-water mollusca.

Pairing takes place early in the spring.

The nest consists of a slight hollow in the sand or shingle of the beach they frequent.

The bottom of this has sometimes fragments of shells arranged in it, evidently brought by the bird for that purpose; and rarely the eggs are deposited upon some of the dried sea-weed to be met with in their haunts.

The eggs are four in number, and are of a cream-colour, streaked and spotted with blue and black. They measure one inch and five lines in length by one inch in breadth.

Incubation is usually completed from the middle to the end of May, and is said to last for fifteen or sixteen days.

During the period of incubation, which is performed by both parents, if they are disturbed, they usually first run from the nest, and then fly off without any cry or noise; if however frightened after the young are hatched, they betray all the usual anxiety exhibited by birds under similar circumstances;—flying round and over you, crying, and trying to call off your attention from its young brood; which in the meantime are busily occupied in hiding themselves, by squatting among the stones around them. The young birds are able to run soon after quitting the egg.

Varieties of this bird are by no means common. The following is recorded by Mr. Thompson:—"A singular variety of the Ringed Plover was shot on the 1st. of August, 1842, in Belfast Bay. It is wholly white, except where the plumage is ordinarily blackish, that is, on the gorget, the primaries, and a band towards the extremity of the tail; all of which are, instead, of a very pale yellowish brown. The portions of the plumage, usually of a very pale yellowish white cast, are in this bird of a pure white. Bill, pale brown, instead of black; legs, yellowish. The specimen is preserved in the Belfast Museum."

The male has the bill black at the tip, the remainder yellow, shading into orange at the base; irides, brown; lower part of the forehead, cheeks, and ear coverts, black; on the forehead is a band of white running down to the eye. Crown, black; back of crown and nape, hair brown; over the ear coverts and eye is frequently a pale streak. Chin and collar round the neck, white; below this is a collar of black, broad in front, narrow behind. Back, wing coverts, tertials, and upper tail coverts, uniform hair brown; primaries, blackish brown; part of the shafts, near the tips, white; secondaries and greater wing coverts, tipped with white, forming a bar across the wing, visible when the wings are extended. Tail feathers, hair brown at the base, shading nearly into black towards the end; the centre feathers have a slight white tip, becoming wider on the others towards the sides; the outside one is altogether white, and the second has its outside web of that colour. Breast, belly, vent, and under tail coverts, white; legs and toes, orange yellow; claws, black.

The female resembles the male.

In the young birds the bill is dusky; they are without the black band on the forehead; the other dark parts of head and neck are ashy brown. Legs and feet, pale yellow.

The length is about seven inches and three-quarters.

KENTISH PLOVER, (*Charadrius Cantianus*.) Latham.

THE trivial name of this Plover would give the idea that it was only to be procured in the county of Kent; there, certainly, the first specimens were obtained between sixty and seventy years ago, and on its coast some are still to be found; yet it has since occurred along the shores of both Norfolk and Sussex, and is probably to be met with on other parts of the southern coast.

In Scotland we believe it has not been seen.

In Ireland it has occurred in several instances, as far north as Belfast, where Mr. Thompson states it has been shot on two occasions, but the specimens unfortunately were not preserved. On the muddy shores of Dublin Bay it has been procured on several occasions; in 1846, in the autumn, as recorded by Mr. Thompson; in August, 1851, and several specimens in the winter of 1852, as mentioned by Mr. Watters, in his "Birds of Ireland."

Out of these countries it is found in Germany, Holland, France, Italy, and was obtained at Seville, in Spain, by the Rev. C. A. Bury, who also states that it was abundant on the sea-shore at Malaga. It is also found in Tartary, India—near Calcutta, Java, and Northern Africa.

In habits and food it closely resembles the bird last described.

It is to be found in the same situations, mixing with the Ringed Plovers, but, it is said, not flying off with them when disturbed.

The nest is merely a slight hollow in the sand or fine shingle, on the beach just above high tide mark; in this four eggs are deposited, the ground colour of which is a yellowish stone, with streaks and spots of black. They measure in length one inch and a quarter by eleven lines in breadth.

According to Meyer incubation lasts seventeen days.

The habits of the young, and of the old birds in protecting their progeny, are similar to those of the Common Ringed Dotterel.

In the adult male the bill is black; irides, brown; the forehead, a streak over each eye, the cheeks, sides of neck and collar round it, breast, belly, vent, and under tail coverts, pure white. Above the white forehead is a band of black; a black streak runs from the bill to the eye; ear coverts, black. From the point of each wing a patch of black extends forwards on the breast, but the two do not join in the centre, which is white. Top of head and nape, reddish brown; back and wings, light hair brown; primaries, brownish black with white shafts; secondaries, tipped with white; centre tail feathers, dusky black, lighter towards the base; the outside two feathers on each side, white. Legs, feet, and claws, black.

In the female the black on the head and neck is rather smaller in quantity, and not so decided in colour.

In the young birds the black patch above the forehead is wanting, and what is black in the adult is of a browner tint in the young bird. The bill, legs, feet, and claws, black. The length is about seven inches.

LITTLE RINGED PLOVER—Little Ring Dotterel, (*Charadrius minor*, Meyer.)

As a British Bird this is one of our rarest species, but one solitary specimen having been, with certainty, procured. Never having seen the bird, we quote from Gould, as given in the last edition of "Yarrell's British Birds." "We are indebted to our friend, Mr. Henry Doubleday, of Epping, for the loan of an example of this elegant little Plover, which he informs us was taken at Shoreham, in Sussex. From the extreme youth of the specimen transmitted to us, it is clear that it must have been bred on the spot; and it is worthy of notice that the person who killed it, affirms that he has long suspected the present bird to be a resident on that part of the coast, from having remarked that he could always perceive a difference in the note of this bird from that of either of the other species. Whether this Plover habitually resorts to our shores or not, it may now reasonably claim a place in the Fauna of our Island." Mr. Yarrell further states that the Rev. R. Lubbock, in his recently-published "Fauna of Norfolk," says that "two specimens of this bird in the Norwich Museum, were believed by Mr. Denny, the Curator, to have been killed in the county; but the fact was not noted down at the time."

It has not been recognised in either Scotland or Ireland.

On the continent it is said to be not uncommon; but it is not so northern in its range as the Ring Dotterel; it however occurs in Sweden, Holland, the south of France, and Italy. In Asia it is said to occur in Nepal, about Calcutta, and in Japan.

It would seem that it migrates from the warmer latitudes to temperate countries for the purpose of incubation; returning again southwards when that is completed.

Its habits seem to be very much like those of the Common Ringed Plover, except that it is more frequently found on the sides of rivers than its congener; appearing to prefer them to the sea-shore. Its food is also similar.

Its nest, which is frequently placed on some of the sandy islands found in the larger continental rivers, is, according to Meyer, "a perfect rounded cavity in the ground, or layer of small stones;" and is generally placed "where the smallest particles of gravel cover the surface of the ground, but never on the fine sand." Yarrell, on the authority of Mr. Hoy, states that "it lays its eggs on the sands; not a particle of grass or other material being used."

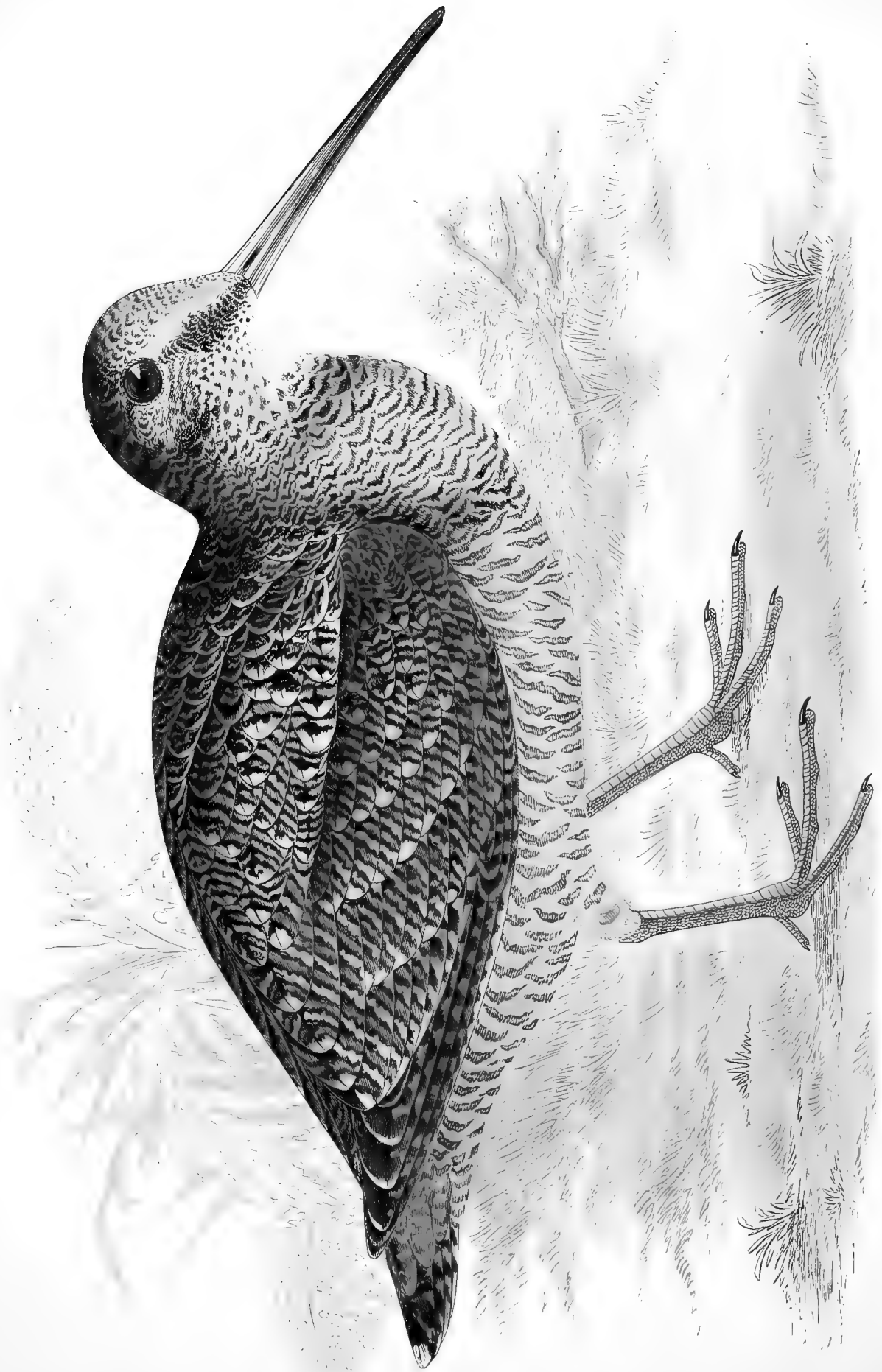
The eggs are said to be four in number, of a pale yellowish stone-coloured ground, with numerous small three-coloured spots, namely, "bluish ash, red brown, and dark brown."

The adult bird has "the beak black; the irides brown; the forehead white, with a black patch above it, extending to the eye on each side; top of the head and the occiput, brown; lore and ear coverts, black; nape of the neck, white. Back, scapulars, wing coverts, tertials, rump, and upper tail coverts, ash brown; primary and secondary wing feathers, dusky brown; these and the greater wing coverts edged with white. The first primary quill feather with a broad white shaft; tail feathers, ash brown at the base, darker towards the end. The five outer tail feathers on each side white at the end; this colour increasing in extent on each lateral feather, the outer one on each side having only a dusky spot on the inner web, but this appears to be constant at all ages; chin and throat, white—this colour extending from the latter round the nape of the neck; below this and above the breast is a collar of black. The breast itself, the belly, vent, and under tail coverts, pure white; legs and toes, flesh-colour, tinged with yellow; the claws, black.

Adult females have the white and black frontal bands narrower than the males, according to M. Temminck, and they are also less perfectly defined.

Young birds of the year want all the decided black markings which distinguish old birds, and the ash brown feathers of the back and wing coverts have buff-coloured margins."—Yarrell.

The length is about six inches and a quarter.



WOODCOCK.

WOODCOCK.

<i>Scolopax rusticola</i>,	.	.	.	.	LINNÆUS.
<i>Becasse ordinaire</i>,	.	.	.	.	TEMMINCK.

Scolopax. *Skolops*—A stake sharpened at one end: from the form of its bill. *Rusticola*—A Woodcock.

THE Woodcock, although, as we shall presently show, not unfrequently breeding with us, is, as far as all sporting or gastronomic purposes are concerned, a winter visitor to this country. They arrive in considerable flocks or flights upon our shores, usually about the end of September or the beginning of October; and it is a curious fact in the history of these migrations, that they first make their appearance near the line of coast, whether this be north, south, east, or west; and after resting a day or two, distribute themselves over the inland country, in places suited to their habits. With respect to the east and south coasts of England this is well ascertained to be the case; and speaking of the west coast of Ireland, Mr. Thompson says, "Mr. G. Jackson, (gamekeeper to the Earl of Bantry, at Glengariff, for the last ten years,) states that on the Woodcocks' arrival from their northern breeding-places, they are always seen first on the very western shores. He has invariably found them near Dursey Island some days before they appeared inland. This fact is well known to sportsmen living on the western coast of Ireland."

It is not easy to account for this curious instinct, for it is generally supposed that most of the Woodcocks which visit this country, are bred in Norway, Sweden, and Lapland; it seems therefore singular that they should not first be found on the east coast of England and Scotland, and afterwards spread themselves to the westward, as they would thus be able to rest themselves after a comparatively short flight over the German Ocean. We shall not venture to offer any explanation of the phenomenon, but content ourselves with simply directing attention to the fact.

In their autumnal migration the females are the first to arrive; few, if any, males being found among the first flight to any particular locality. They are, however soon followed by the males, who are guided by an unerring instinct through the trackless air to the same localities which were previously tenanted by the other sex alone. Like many other migratory birds, the Woodcock chooses the night for performing its flight, and very generally, if not always, arrives at its destination by or before daybreak. It

would seem from the testimony of various people who have been fortunate enough to witness the arrival of a flight of Woodcocks, that, migrating as they do at a great height in the air, they descend almost perpendicularly to the ground at the termination of their journey.

On the east coast of England, they arrive in good condition, proving that their flight has not been of any long continuance; on the south-west coast, near Plymouth, we have the authority of the Rev. R. A. Julian for stating that they arrive there with the breast-bone prominent and sharp, as if their migration had extended over a considerable period of time; but he adds that a very few days is sufficient to restore them to their usual state of plumpness. Mr. Selby says that Woodcocks "always come over in the greatest bodies in hazy weather, with little wind, and that blowing from the north-east; and it is probable they find the upper region of the atmosphere, in which they fly, freer from counter currents of air, than in more open weather. After a night of this description I have frequently met with great numbers upon the edges of plantations, in hedges, and even in turnip fields, and enjoyed excellent sport for the day; but on seeking, on the following morning, for a renewal of similar success, I have not found a single bird, the whole flight having proceeded on their course during the intervening night." We can hardly think these birds to be those alluded to by Mr. Julian, for the few hours flight which would take them from the east coast to Devonshire, could not reduce them from plump and well-conditioned birds to such as he describes.

In its spring emigration it is usually found congregating near the shores, preparatory to taking its leave of us for a season. Many leave in February, and few remain after March; occasionally, however, a straggler may be obtained in April, and a few remain to breed with us. These last would seem, nevertheless, to migrate as soon as the young ones have arrived at sufficient maturity, and again return with the regular flights in the autumn. Much yet remains to be elucidated in the history of this, as well as many others of our migratory birds.

Like the Snipe, the Woodcock is very generally distributed over these countries, in situations suited to its habits; but some districts are more favoured than others in the numbers that frequent them. So generally, indeed, are they distributed from the north of Scotland to the south of England, and from the east to the west, that any particular record of the various localities is quite unnecessary; but we will merely observe that in Ireland they are much more numerous than in either England or Scotland.

Out of this country, the Woodcock is found in Norway, Sweden, Lapland, Finland, Russia, Siberia, and Silesia. In France and Germany it is not common: it also occurs in Greece and Italy. In Northern Africa, they are found in Egypt and Barbary. In Madeira, they are said to be resident the whole year. In Asia it occurs in India and Japan.

As a bird for the table, the Woodcock is greatly and almost universally esteemed; indeed, the ordinary price, six or seven shillings a brace, for so small a bird, is sufficient proof that epicures will have them if they are to be had. They are dressed with the trail in, as most birds of this order are.

The habits of the Woodcock lead it to remain during the day in some secluded copse or wood, where it lies concealed, reposing under some holly or laurel bush, if such be attainable; or else under some spruce fir or brushwood, where the bottom is moist and clear. Unless disturbed, it remains in this concealment the whole day, but as twilight advances towards night, it leaves its day retreat on steady and silent wing for its feeding-ground, which is usually some marshy locality, often at a considerable distance. Night after night it follows the same well-known though unmarked track through some glade of the wood, returning with the first blush of day by the same road, which from the circumstance of its being regularly frequented by these birds, obtains the name of "cock-road," or "cock-shoot." The period of twilight when the Woodcock flies to and from its feeding-ground, is called by the Devonshire countrymen, "cock-light," as I am informed by the Rev. R. Archer Julian.

During the day these birds may very frequently be found in hedge-rows, particularly those which are wide, and open at the bottom; such situations should always be carefully examined and well beaten, for Woodcocks will often lie very close. Occasionally they will be found in very different situations; we remember once seeing one flushed in the middle of an elevated, open, stony, very dry grass field, in the afternoon of a late October day; we should have rather looked for a Great Plover in such a locality. In districts where heathy mountains prevail, with woody glens interspersed here and there, they may often in open weather, particularly early in the season, be found taking shelter during the day-time among the heath; but woods are their favourite day retreat.

Singular as it may seem, there can now be no doubt of the fact, that Woodcocks carry their young, which are very helpless, from the nest to their night feeding-grounds; this is effected by means of the feet, however unfitted for such an office they may seem. It is with much pleasure that we quote the following from the pen of Mr. C. St. John, in elucidation of this point:—"Many people doubt the fact of the Woodcock carrying her young, from the wood to the swamp, in her feet; and certainly the claws of the Woodcock appear to be little adapted to grasping and carrying a heavy substance; yet such is most undoubtedly the case. Regularly as the evening comes on, many Woodcocks carry their young ones down to the soft feeding-grounds, and bring them back again to the shelter of the woods before daylight, where they remain during the whole day. I myself have never happened to see the Woodcocks in the act of returning, but I have often seen them going down to the swamps in the evening, carrying their young with them. Indeed it is quite evident that they must in most instances transport the newly-hatched

birds in this manner, as their nests are generally placed in dry heathery woods, where the young would inevitably perish unless the old ones managed to carry them to some more favourable feeding-ground."

"Snipes, Redshanks, and several other birds of this genus, are hatched and brought up on the same kind of ground on which they feed; but Woodcocks, in this country at least, are generally hatched far from the marshes, and therefore the old birds must of necessity carry their helpless young to these places, or leave them to starve in the dry heather; nor is the food of the Woodcock of such a nature that it could be taken to the young from the swamps in any sufficient quantity. Neither could the old birds bring with it the moisture necessary for the subsistence of all birds of this kind. In fact they have no means of feeding their young, except by carrying them to their food, for they cannot carry their food to them." The same fact has also been affirmed by several other observers, and Mr. St. John's personal testimony we conceive to be conclusive evidence of their doing so, though Gilbert White considered the feat improbable; yet it is surely less so than that asserted by Buffon, who says that they "take a weak one under their throat, and carry it more than a thousand paces." Bewick quotes this, and as he gives no other explanation or conjecture, it is to be supposed that he looked upon it as possible. "Loudon's Magazine of Natural History" contains several records of Woodcocks carrying their young in their feet, and to it we refer those of our readers who may still have any doubts on the subject.

Its method of feeding is by probing the soft muddy ground with its long bill, the extremity of which is covered, as is also the case with all the birds of this genus, with an extremely sensitive membrane, which probably possesses more than mere sensation. Any worm which happens to be within reach of its bill becomes a sure victim; and the operation of probing is said by Daniels, who had the opportunity of seeing these birds in confinement, to be "performed in an instant, and the action of the Woodcock was so equal and imperceptible, that it seemed doing nothing: it never missed its aim." The feeding-places of these birds may be detected by the small holes left by their borings, and the same ground is frequented night after night.

The flight of the Woodcock is, during the day, generally, slow and steady; and as it rises without much noise, it does not paralyze the young sportsman's nerves, as some of our other game birds do; and he consequently finds it not a very difficult shot, particularly where its flight is not impeded by trees or other obstacles. At night, when going to or returning from its feeding-grounds, its flight is very rapid, and its utmost speed when endeavouring to escape imminent danger, is extraordinarily quick.

The following account from a sporting publication, is so interesting, that we quote it at length:—"It was growing towards evening, and I was about to return to the village of Golgate, when my attention was attracted by the rapid flight of two birds, one

evidently pursuing the other. They had come from the higher and more hilly grounds, and when I first observed them, they were at a considerable distance. They approached and crossed in such a manner as to enable me to distinguish that the first was the small dark-coloured Woodcock, the second a very swift-winged bird, which appeared to be the Sparrow-Hawk; at all events it was a bird of prey, and I feel very little doubt that I am correct in its designation. The distance between the pursued and the pursuer might be about thirty yards; they crossed me at about three times that distance, which afforded a good view of this interesting struggle; the former was flying for life, the latter for a supper. The flight was direct; there was none of that turning and twisting which may be frequently observed when a small bird, in the presence of its merciless enemy, the Sparrow-Hawk, the Hobby, or the Merlin, endeavours to avoid or procrastinate its fate by twisting and dodging; on the contrary, the Woodcock continued his course, took the sea, followed by his fierce pursuer, and they both flew completely out of my sight. I kept my eyes in the same direction for some minutes, but I could observe the return of neither the Hawk nor the Woodcock; whether they were lost in the Channel, or reached the Sister Island, I cannot pretend to decide; but, as long as I could descry them, the bird of prey did not gain upon his intended victim.

I observed a Woodcock pursued by a Hawk on another occasion, (in Delamere Forest, Cheshire,) when, after a short space, the latter gave up the chase, and the Woodcock flew completely away. These are incontestible proofs of the extraordinary power and speed of this bird on the wing; and if, indeed, we examine the Woodcock, we shall find that nature has made ample provision for the purpose, in the superior strength of the pinion and feathers."

The Woodcock is monogamous.

Woodcocks are sometimes taken by horse-hair snares, which are set in intervals, purposely left here and there, in a little hedge, or wall of a few inches high, placed in its feeding-grounds; the bird coming to this hedge, does not attempt to jump over it, but runs along till it comes to one of the openings, and in attempting to avail itself of this it is taken in the snare. Nets were also formerly used for the capture of these birds, but are now never used.

The chief food of these birds is undoubtedly worms, and these are obtained, as we have before remarked, by probing the ground in soft wet places. The old notion that the Woodcocks, as well as the Snipes, lived on "suction," is now quite exploded; though what was intended to be conveyed by the expression, we confess we never quite understood; but we suppose it must have referred to some very subtle and immaterial articles of diet. So far, however, from the Woodcock subsisting on such light and airy nothings, it consumes an incredible quantity of substantial, though easily assimilated, food, of which small earthworms form the staple. It also feeds on insects of various

kinds; and one method in which it procures these, is thus mentioned by the Rev. R. A. Julian, in "The Naturalist," (vol. iv. p. 78:)—"I frequently noticed last season the fallen oak leaves disturbed in patches for some yards where I found these birds, and was at length highly gratified, whilst peeping over a bank, in seeing one taking up the leaves separately, and passing them, quick as thought, through its beak; thus clearing off the small insects that adhered to both sides." Add to these water beetles, and other aquatic insects, and a moderate quantity of vegetable matter, mostly a *Conferva*, which usually abounds in the water in the feeding-places of these birds. Small pebbles are also generally found in the stomach.

The terms applied by sportsmen to these birds are as follow:—a couple, or a couple and a half, of Woodcocks; a greater number is called a fall or flight. In putting it up you are said to flush it; and it is then on the wing. When at rest they are fallen.

The dogs best calculated for beating for Woodcocks, are small stout spaniels; for the fatigue of pushing through bushes and brambles for the whole of a sporting day is considerable; and very small slight dogs, though highly bred, are unequal to the work. In suitable localities, such as wooded glens, we have seen excellent sport secured by sending men with sticks, literally to "beat about the bushes." Should there be a road or pathway tolerably open, down the centre of the glen, you may be sure of pleasant shooting, if the woods contain any Cocks.

The sight of the Woodcock would seem to be not very acute in the day-time, at least when directed to any object immediately in front of it; this arises probably from the lateral position of the eyes. We quote the following anecdote, bearing on this point, from the paper by the Rev. R. A. Julian, already referred to:—"This season one flew against my breast; and last year another was observed by a friend of mine to knock itself down against a house, and when he came to the spot it was perfectly dead. I have heard my father relate an incident of one flying against a marker, whom he had stationed in a tree, and striking him so severely on the cheek as to draw blood."

The following account of the shooting of a white Woodcock in Ireland, we take from "The Sportsman" Magazine, of July 1836, in which it appeared under the signature of "Cycyl."—"My friend Captain St. Q——, well known in the Irish sporting circles, while quartered last year in Galway, in Ireland, was asked by Colonel Persse, to join a party to shoot Woodcocks in the covers adjoining Clarum Bridge, saying at the same time, that a white Woodcock had been seen occasionally; according to the report the country people made, it had visited these woods regularly every year for the four years past. I made inquiries to ascertain the fact of so singular a circumstance, and from every information I could collect, the fact was proved beyond a doubt.

Taking advantage of a fall of snow, a time it is well known to all sportsmen, all outlying Woodcocks are driven into the woods for shelter, a large party were asked and

assembled with incredible alacrity, from the well-known excellence of the covers, abounding, as they do, with holly and arbutus. Each of the party had fully made up his mind that at least no exertions on his part should be wanting to bag the white Woodcock; and even if it should not be found, the day's sport would certainly be superb.

On arriving at the ground, the snow still continued to fall, although not heavy, which freezing as it fell, was of but little inconvenience to the party. The guns were stationed so as to give as small a chance of escape as possible to this 'rara avis,' if found. The first cover was closely beat, and although affording first-rate sport, still the object of every one's hopes and expectations had not appeared. While walking to the next cover, a passenger, judging solely from their long faces, would have laughed in his sleeve at the effect which the want of sport had upon the sportsmen's spirits.

A few minutes' walk brought us to the next cover, abounding with that attractive canopy to Woodcock, the holly tree, (for to this it grows in Ireland,) and the arbutus, which abundantly clothed both sides of an abrupt though short glen, giving an outlet for a spring which rises in the centre of the wood, surrounded by rocky elevations; on these the shooters chiefly took their stations. Captain St. Q——— had placed himself on the outside. Some of the beaters having beat through to the end, were standing or lying about. No white Woodcock had appeared; the Captain with another of the party were moving off to the next cover, when one of the beaters, Cornelius O'Brien, all through the most sanguine about finding it, just peeped out of the cover, to see if, in his opinion, the guns were keeping a good look out. To his dismay he saw Captain St. Q——— walking off, thinking the cover beat. Corny rushed at him, hallooing out, "Oh! Captain, jewel! Oh, your honour, may the saints protecht ye; but ye have laved her behand ye. Oh! glory to your sowl, come back and finish her. Och, is it to be laving her you are, after his honour's raising all the gentlemen in the country to kill her, and may be the crature dancing in her delight at decaving so many English gentlemen, for she's a 'cute little darling? I tell your honour the very best spot is laved, and it is I who ought to know it too. Oh! your honour will come back?"

Who could have withstood this appeal? Captain St. Q——— returned, certainly not expecting to see the bird, notwithstanding all Corny had been saying.

Corny went to the spot alluded to, hallooed out a few times, cock, cock, cock, hey cock, followed by a loud, deep—mark! mark! and an Irish screech that I cannot describe. Past went a bird like a white pigeon—off went the gun—bang—bang—to make sure—whiz—and down it came, with a cheer from the beaters echoing through and through the wood, almost exceeding the exhilarating cheer, when, after a long unsuccessful draw, a fox slips away over a fine country in full view of an almost hopeless field. Up Corny runs stumbling over every impediment in his hurry, until he catches it; then, as proud as a duke, he walks with the bird in his hand up to the party, saying—"Oh! your honour

is the best shot in the county of Galway, out and out; sure your honour that was an elegant shot! oh, it was indeed a fine shot; I would walk the world over, after your honour, shooting!" After the examination Captain St. Q—— became the lion; a thousand questions were asked as to the exact position it was in when struck, such as a little up or down, flying to the right or left, etc., etc. In a short time each man had a different version of the fact; some hinted it was no remarkable shot; if they had been there, they could have killed it too; and certainly never could have mistaken it for a white Pigeon, for really that was too ridiculous.

But the death of the white Woodcock does not, as you may suppose, rest here. All the old men and women attribute their ill luck this season to the death of the "good bird" (fairy.) Cornelius, too, has been but badly off since; his crop of potatoes, on which he had placed so much consequence, from the appearance of the stalk, on getting up, proved to be a complete failure; and, to sum up all, his wife, a sweet pretty creature, the beauty of the barony or the adjoining ones, with eyes like sloes, snow-white teeth, and a beautiful figure, has been brought to bed of an idiot—all through Corny having been one of the murderers of the "good bird" who had protected the barony from all harm these four years back.

Ould Widdie O'Reiley has said, "In one more season Córny will want for a pratie," and "the ould divil is too demented to say what is not true," at least so Father O'Toole says.

To those who know Ireland, this will not appear extraordinary; to others I must beg to assure them this is quite the feeling of the Irish. That Corny will want is beyond a doubt; for there exists, although quite unintentionally, a sort of superstitious combination against him. But having no faith in these things myself, I have now only to say that the bird was rather large, milk white, with the exception of two brown feathers in the right wing, and one in the left; the beak brown, and the legs grey. The eyes were what is termed "wall-eyed" in horses; the condition was excellent.

The bird is stuffed in the best style, and in the possession of Colonel Persse, of Galway, and any person, by making a proper application, I dare say, will be allowed to see it."

The time of pairing is somewhat uncertain, but it is probably very early in the spring; some think that pairing takes place before they leave our shores, but this seems to be doubtful, unless among those that are late in migrating. A considerable number of these birds annually remain to breed with us; and from the infrequency of such records formerly, we are obliged to conclude that some unknown general cause has of late years been in operation, which has led them to remain here to breed. What this cause may be, no one seems to know; it possibly may be that the extensive forests in the north of Europe may not now offer as secure and quiet a retreat as formerly; indeed we have heard that for some years past their eggs have been eagerly sought after

and exposed in the markets in Sweden for sale. Whether this has been carried on to a sufficient extent to induce the birds to seek other nesting-places, we are not able to state: we merely mention the fact.

The nest of the Woodcock is placed on the ground, and is composed wholly of dead leaves, such as those of the ferns. It is built in some dry situation in a wood, often among long grass, but where there is little underwood; or among heath, which is sometimes found in open elevated woods. Mr. C. St. John states that the nests are found in Sutherlandshire, "not only in the large fir plantations, but also in the smaller patches of birch, etc., which fringe the shores of many of the most northern lakes." "As I have seen their nests at all times from March to August, it is natural to suppose that the Woodcock breeds more than once in the season."

During the time of incubation the Woodcock has a call-note, syllabled by Mr. James Creighton, gamekeeper to the Earl of Roden, at Tollymore Park, County of Down, by the words 'waap-waap' 'weep-weep,' in addition to their ordinary one of 'hisp.' He believes the calls to be used by both sexes; and as the Woodcock breeds abundantly in Tollymore Park, Mr. Creighton must have had ample opportunities of determining the fact.

The eggs, which are four in number, have the ground colour a pale yellow white, with spots and blotches of ash gray, and two shades of reddish yellow brown at the broader end. They measure in length one inch and three-quarters, by one inch and a third in breadth. The time occupied in incubation is believed by Mr. Creighton to be twenty-one days; and he states that the young leave the nest immediately after birth, and that the male bird remains within a dozen paces of the nest during the time of incubation.

When the following accounts were written, the nesting of the Woodcock in this country was a very rare occurrence, though then becoming more frequent than formerly:—Mr. W. C. Williamson has recorded in "London's Magazine of Natural History," the occurrence of three pairs breeding "in one wood belonging to Francis Hurt, Esq., of Alderwasley, near Derby. The nests, when discovered, all contained eggs, the old birds being then sitting. I wrote to Mr. Hurt on April 29th., (1836,) requesting him to procure for our society a nest with eggs; and, two or three days after, he kindly sent me the nest, with the broken shells of four eggs, which, as well as those of the other nests, had been hatched even at that early period of the year. Two of the young broods, with the old birds leading them about, have been seen by the gamekeeper of that gentleman, who remarks in his letter, that, on going to the nest, the old bird did not rise until he had approached within the distance of a yard. They were all in dry, warm situations, amongst dead grass and leaves, without any attempt at concealment. The nest sent was wholly composed of dead leaves, chiefly of the common fern, loosely laid together, and without any lining. The underwood was thin, and of not more than from seven to ten years growth."

The Rev. W. T. Bree, in 1828, collected a number of instances of the Woodcock breeding in this country. Two young ones were shot on May 19th., 1828, near Nuneaton. A nest and four eggs were found in Ryton Wood, near Coventry, early in May, 1827, but were deserted. Woodcocks were shot on April 9th., 1828, in some woods near Nuneaton. Three other instances are also mentioned, as quoted from the local papers.

We give the above as being some of the earliest records on this subject; the list might now very readily be greatly extended, but we shall merely observe that Woodcocks' nests are by no means very rare in many districts in the north, and that they have occurred repeatedly even in the extreme south in Dorset and Devon, and more or less frequently in nearly all the intervening counties.

The Woodcock readily submits to confinement; in "The Naturalist," the Rev. R. A. Julian says, "My father informs me a bird of this species, which had been pinioned, was kept alive for several years at Widey Court, about three miles from this town, (Plymouth;) it suffered, however, severely in dry summers, and was only sustained by strips of raw meat, placed in a pan with mud. At other times it managed to shift for itself pretty well."

Woodcocks vary much both in size and colour, depending probably on the effects of age or sex, or both; some sportsmen contend that there are three species, or at least varieties, and specify the common ash-coloured one; the small red bird; and the large black or dark one: these we believe to be all referrible to the one species varied by age or sex. The subject is however yet open to investigation, though the opinions of naturalists are generally such as we have expressed. The Rev. G. F. Dawson, in the "Zoologist," however, has thus alluded to one of the varieties, and as the subject is one of some interest, we extract it, leaving it to future observers to decide the point.

"That there is a small variety of this bird, (which may eventually prove a distinct species,) I have long been aware, as many sportsmen must be also, but it has never, I believe, been generally noticed. Latham, indeed, speaks of two varieties of the common bird, and even describes three; but mentions them more as occasional deviations, than as possessing any permanent points of difference; yet the distinctive characters of the smaller bird in question are beyond what we should ordinarily assign to an accidental variety. It is more local, it is true, in its distribution; but independently of its smaller size, which alone would form no criterion whereby to judge of its distinctness from the Common Woodcock, which is well known to vary in size and weight most astonishingly; it possesses several other characteristics, which at once clearly distinguish it. In the family of *Scolopacidæ* generally, the females are not only larger than the males, but also of a darker plumage; the dark shades on the upper part of the back of the Common Woodcock, for instance, being blacker, and the red of the lower portion of a deeper red in the females than in the males; but in this small variety the colour of the males is much darker than that of any females of the common sort; in fact, it is known in some parts of the

country by the name of the Little Black Cock. It differs also in its flight, by which it may be distinguished before it is brought to the ground by the fowling-piece of the sportsman; whereas the common bird generally springs with a noise which sometimes almost rivals that of the hen Pheasant. This bird, on the contrary, rises silently, and flies off in a sort of wavy or zigzag direction, a good deal like a Snipe, and with a flap of the wing as noiseless as that of an Owl; and indeed, I recollect, on one occasion, several years ago, when, having killed one, I believed so confidently that I had been shooting at an Owl of some rare species, that was to prove to me a prize, that when I picked up my bird I was surprised to find it a Woodcock, forgetting, at the moment, the usual peculiar flight of this Little Black Cock."

Other varieties, which may be considered accidental, are not very uncommon; thus we find in addition to the pure white variety, which we have already noticed, others on record in which the general colour is much lighter, more approaching to a cream-colour, or pale ash. These do not however require special notice, and several are mentioned by Bewick in his "British Birds."

The bill, which is dark brown at the tip, shading towards the base into pale brownish pink, is about three inches in length; eyes, large and prominent; irides, dark brown, orbits, pale buff. The forehead, and as far as the centre of the head gray; from thence to the nape are four blackish brown transverse bands, separated by narrow bars of light yellowish brown; from the gape to the eye is a stripe of rich brown; cheeks, pale yellowish brown, with dark brown spots. Under the ear coverts is a band of dark brown; chin, pale yellowish brown; front of neck, breast, and belly, yellow brown, barred transversely with darker brown. The upper parts are prettily variegated with gray brown, pale ochre, and red brown with some dark brown markings. These colours are disposed in a variety of ways, in spots, bars, and streaks, and otherwise mottled; but as a very lengthy description would be requisite in order to give these with accuracy, we shall content ourselves with this general description, and refer to our plate, which will give all requisite information. Primaries, black brown, the outer webs marked with triangular spots of reddish brown; the outer web of the first primary is usually of a lighter colour than that of the other quills; and often it will be entirely destitute of dark markings; some sportsmen consider this to indicate a female; others a male; it however appears to be a very uncertain guide, occurring as often in one sex as in the other, being simply a characteristic of age; the dark markings gradually disappearing from the base to the tip as the bird becomes older. The tail consists of twelve feathers, which are black, but tipped with gray: underneath the tips are pure white; the upper tail coverts only allow about three-quarters of an inch of the tail to be seen. The legs are short, feathered to the knees, of a brownish flesh-colour; claws, black.

The female has the feathers on the upper part of the back blacker, and those

on the lower part redder, than the male Woodcock. She is also always larger.

The young birds have the bill shorter than the adult.

Few birds vary more in weight than Woodcocks. The ordinary weight of the adult male is from eleven to twelve ounces; the females will often weigh from fourteen to sixteen ounces; the latter weight is however by no means usual. Mr. Yarrell, on the authority of Lady Peyton, records one shot in 1775, or 1776, which was of the extraordinary weight of twenty-seven ounces: and another, obtained some years previously, which weighed twenty-four ounces.



GREAT SNIPE.

GREAT SNIPE.

SOLITARY SNIPE. DOUBLE SNIPE. YSNID, OF THE WELSH.

<i>Scolopax major</i>,	. . . . .	LINNÆUS.
<i>Grande Bécassine</i>,	. . . . .	TEMMINCK.

Scolopax. *Sklops*—A stake, from the form of the bill. *Major*—Greater.

THE Great or Solitary Snipe is usually considered as only a straggling visitor to these islands from the high northern latitudes in which it breeds. By far the greater number of specimens have been obtained in the autumn and early winter months, and these would seem to be merely stragglers from the great body which, Mr. Selby thinks, migrate to countries considerably to the eastward of England.

In England they occur not uncommonly in Norfolk, as stated by Mr. Yarrell, on the authority of the Rev. R. Lubbock, who says, "I have known more than twenty specimens come under my own observation in the same season; but I cannot remember a single instance where this Snipe has occurred in spring: I have made many inquiries, and have invariably found them occurring in autumn, generally early in the season, often in September." The Reverends A. and H. Matthews have recorded that "a few specimens of the Great Snipe have at different times been killed in this part of the country, (Oxfordshire.) The last of these was shot on the banks of the Isis, close to the city of Oxford, in 1839, by a servant of Worcester College." The time of the year is not mentioned. They have also been shot in Cornwall, Devonshire, Oxfordshire, Kent, Lincolnshire, and Lancashire; and probably in many other counties.

They have been met with in Wales.

In Scotland it is very rare.

In Ireland they have been frequently procured, and a number of instances are recorded by Mr. Thompson; who, however, considers it a rare visitor. We make the following extract from his valuable work, relating to the occurrence of this bird in the county of Wexford:—"In November, 1836, Captain (now Major) T. Walker, of Belmont, Wexford, wrote to me respecting the occasional occurrence of the Solitary Snipe in that county, where he had not however met with it since 1830 or 1831. Being farther questioned,

that gentleman replied in July, 1846:—"The Solitary Snipe I have at different times shot here, is much larger than the Common Snipe; bill, shorter; plumage, nearly alike, with the exception of the belly, which in the Common is white, but in the Solitary is speckled with gray and brown. It lies close, and when flushed, makes no cry, flies steadily without twisting, and slower than the Common, (probably from its fatness, and not being a shy bird,) and pitches again, like the Jack Snipe, after a short flight of thirty or forty yards. I never heard a cry from it; but sportsmen abroad have told me it has one, not, however, resembling that of the Common Snipe. I believe that every year several come over, though not found by sportsmen, who do not know where to look for them;—not in bogs, but in *long-grass* fields, in marshy neighbourhoods. They frequent these abroad, and are called *Meadow Snipe*, (*Wiesen-schnepfe*.) They breed in the marshes of Hungary, and, being migratory, come to the marshy district between Laibach and Upper Laibach, long before any frost could influence their flight. They remain there not more than a fortnight, and, I know from sportsmen, are soon afterwards found in quantities in the Pontine marshes. The Double Snipe of the continent is the same as the bird I have killed in Ireland. In one winter, about fifteen years ago, Solitary Snipes were plentiful in the grassy lands of Hayestown, at the foot of the mountain of Forth, about four miles from Wexford. Every day I shot there, I got three or four birds; since that time the ground has been drained, and all kinds of Snipe have quitted it; but I generally get a few elsewhere in the course of the winter's shooting in the county of Wexford."

Out of this country the Great Snipe is rare in France, Italy, Switzerland, and Bohemia. It breeds in Norway, Sweden, Holland, and Germany. It has been obtained at Trebizond, and in the Caucasus.

They are said to be "most delicious eating," and are dressed in the same way as the Woodcock and the other Snipes, with the trail in.

The Great Snipe approaches in some of its habits and manners to the Jack Snipe, rather than to the Common Snipe. When flushed, it flies but a short distance, and then settles again; it rises without any cry, and flies much more heavily and steadily than the Common Snipe, and is consequently an easy mark for the sportsman: should he however wish to follow out and enjoy the shooting and eating these birds, he must proceed to Sweden, where Mr. Greiff states that fifty or sixty may be killed in one day, particularly in autumn, when they are extremely fat: this fatness has been remarked upon by nearly all those who have been fortunate in meeting them in any numbers, and their heavy flight has been attributed to this cause. Their haunts are said to be somewhat different to those of the Common Snipe, being long-grass marshy fields, and not bogs. By far the greatest number of birds shot in this country are young birds of the year; but we have seen a fine old specimen, which had been procured in Ireland; the locality we could not ascertain. The breast and abdomen of this specimen were more

white, and had fewer of the dark markings than in any other Great Snipe we have ever met with. Though called solitary, it seems in countries frequented by it in any numbers, to be generally found in pairs. When flying it is said to spread the tail like a fan.

It is monogamous.

Mr. Greiff states that it has a peculiar note at the breeding-season, and "commences with a sound resembling the smack of the tongue, and thereupon four or five louder follow."

The food of the Great Snipe is said by Sir Humphrey Davy to be the larvæ of the Harry, Daddy, or Father Long Legs; in scientific language, *Tipulæ*. These are very abundant in meadows, and are exceedingly injurious to the roots of the grass on which they subsist: this may in some measure account for these birds frequenting meadows, where their favourite food is so plentiful.

In Sweden the shooting of the Great Snipe commences in July, and may be pursued till the end of September.

The nest is very simple, consisting of a little dry grass, or other marshy plants; it is placed in some slight depression in the ground by the side of a tuft of coarse grass or rushes. The eggs are four in number, and are spotted with two shades of red brown upon a yellow olive brown ground. They measure one inch and three-quarters in length by one inch and a sixth in breadth. Incubation is usually completed by the end of May, or early in June.

In the adult the bill is of a pale yellowish brown with dark brown tip, and is about two inches and a half long. Irides, dark brown; forehead and crown, dark brown, divided in the centre from before backwards by a streak of pale brown, and bounded on each side over the eye and ear coverts by a similar pale streak. From the beak to the eye is a streak of dark brown. Chin, pale yellowish brown; neck, pale brown, each feather with a darker centre. The upper parts are varied, as in the other Snipes, with black and blackish brown, streaked, margined, and tipped with buff and white, but which it is not easy to convey a correct impression of by words. Quills, gray black, with the shafts white; secondaries, black, tipped with white; tertials, black, barred and streaked with pale brown; rump feathers, dark brown, with pale edgings; upper tail coverts, pale wood brown, with darker markings. The tail consists of sixteen feathers; the centre eight black, with a chesnut tip, terminated with a narrow bar of black and white; the four outer feathers on each side are white, with some black bars on the outer webs; the whole much concealed by the coverts. Breast and sides, pale ochreous, marked with crescentic bands of black; belly and vent, yellowish white. The legs and toes would seem to vary considerably; Mr. Yarrell having seen them of a livid green and light drab in fresh specimens.

The female is larger, and darker in her markings, than the male.

The young birds may be known by the tail being without the white outside feathers,

and in having the bill short. The whole of the plumage also is darker than in the adult bird.

In weight the male reaches to seven or eight ounces; the female to nine.

The length from the tip of the bill to the end of the tail is about twelve inches. The expanse of the wings is about eighteen inches.

The plate is taken from a very beautiful drawing by John Gatcombe, Esq., of Wyndham Place, Plymouth. The specimen from which it was drawn was procured in the neighbourhood of Plymouth.



SNIFE.

COMMON SNIPE.

WHOLE SNIPE. FULL SNIPE. HEATHER-BLEATER.

<i>Scolopax gallinago</i>,	.	.	.	.	.	LINNÆUS.
<i>Becassine ordinaire</i>,	.	.	.	.	.	TEMMINCK.

Scolopax. Skolops—A stake sharpened at one end, from the form of its bill. *Gallinago*—.....?

THE Common Snipe is well known to every sportsman, being very generally distributed over the whole country, and in some districts, where haunts suited to its wants and habits are found, it exists in great numbers. Although a very considerable body, greater perhaps than is generally supposed, remains with us throughout the year, breeding in our marshy heaths in the spring, yet there is no doubt that a very large accession to their numbers is received during the autumn months; and again in the spring the great body disappears for more suitable localities for incubation than this country commonly affords.

Out of this country its geographical range appears not to be exactly defined. This is owing to the very great similarity which exists between different species of these birds. It is however said to frequent the whole of the north of Europe—Norway, Sweden, Lapland, and Russia; and in Asia—Siberia, Smyrna, and Sumatra. We give these localities, but it is quite probable that they may be either added to or curtailed, when the subject comes to be more minutely investigated.

As an article of food, it is so well known and esteemed that it is hardly necessary to remark upon it. It is dressed on a toast with the trail left in.

The haunts chiefly selected by the Common Snipe, are the margins of marshy places, moist meadows, peaty bogs, and commons; the edges of small tiny rivulets; little open ditches in fields; and very often ploughed lands. Severe frost will however frequently drive it to places where we should hardly expect to find it; thus we remember on one occasion springing a Snipe on the sea-shore, not in a muddy, soft place, but on the small shingle, at the edge of the water; apparently seeking its food as the Dunlin and Ring Dotterel do. When you spring a Snipe, it manifests the greatest reluctance to fly with the wind, and in fact never does so more than a few yards, when it turns, and after several 'tacks, or zigzag movements of great rapidity, it goes off in the teeth of the wind. The Snipe

is generally considered a difficult shot, but this arises, in a great measure, from the sportsman firing at it during its zigzag flight, when the chances of hitting it are extremely small. The proper time to fire is either immediately the bird is off the ground, and before it has commenced its eccentric movements, or else just after it has concluded, and is commencing its proper and steady flight.

In beating for Snipe, the sportsman should always endeavour to spring them down wind, for the bird of course at first flies off down the wind, but immediately commences flying against it, which it accomplishes, as before stated, by a series of 'tacks;' and by the time these are over, and its flight is steady, it will seldom be out of your reach, but will generally present a fair side shot for your gun. During wet or windy weather, the Snipe will not lie well, but is usually very wild. To enjoy Snipe-shooting to advantage, the weather must be still and calm; on such days the birds lie closely, and will rise well within shot. To aid in finding the Snipe, a good pointer or setter is desirable. When a Snipe is shot, the gun should be re-loaded before picking the bird up, for it very frequently happens that in walking up to the dead Snipe, another is put up, which, if you are unprepared, escapes.

The Snipe is generally considered a solitary bird in its habits, and it is urged in proof of this, that where they abound, and are put up in large flocks, they instantly scatter, and do not fly off in a body. This is true, as to the fact, as we have several times witnessed in Ireland; but we should be inclined to look upon their scattering, under such circumstances, as a preservative instinct, rather than as a proof that they are unsociable birds. We hazard this conjecture from having, on many occasions, in the south-west of Dorsetshire, seen small flocks of Snipe, numbering from twenty to thirty or forty birds in each, flying in a body when not frightened, and continuing together as long as they kept in view. This was generally late in autumn, or early in winter.

The following remarks on the habits of this bird, by the late Mr. Thompson, are so much to the purpose, that we venture to give them entire:—"I have myself had some experience in Snipe-shooting, and can truly say, that of all our birds, Snipes seem to be the most sensible to the skyey influences; or possibly what appears to us their sensibility, may be prompted by their instinctive knowledge of that of the minute creatures on which they prey;—the successful pursuit of these may require the frequent change of ground. Bogs, under similar circumstances of weather, at least to our senses, will exhibit their thirty or forty brace of Snipes one day, and not more than three or four brace the next. The birds would seem to be almost ever on the move from one locality to another. At the dusk of every evening, too, they leave their more retired daily haunts, chiefly to feed in localities where they would be disturbed during the day. At such times any little moist place invites them;—two low, excavated portions within the grounds of the Royal Academical Institution, in the town of Belfast, were at one time, (and may be still,) nightly

visited. We generally meet with them at the 'witching hour' on flight from the higher to the lower grounds; but when I have been walking on the mountains in the autumnal evenings, they have passed over my head on their way from the valley towards the mountain top. We can hardly walk anywhere about the town just named, (Belfast,) in the autumnal or winter days, and sometimes even in those of summer, when becoming dusk, without hearing the call of the Snipe on the way to its nightly quarters.

It is an extremely interesting sight to witness these birds coming in numbers to favourite night feeding-grounds, such as the 'bog meadows,' already mentioned; when stationed on the ditch banks intersecting them, awaiting 'the flying' of Wildfowl—Ducks, Wigeon, Teal, etc., one hears a continual concert kept up by Snipes coming at the commencement of twilight from the higher grounds—their places of refuge for the day—and alighting all around, the call ceasing the moment they touch the earth. For an instant only in the twilight are they seen, and then with downward pointed bill, they have a most singular appearance, as they sometimes come falling, apparently from the clouds, close around us. Notwithstanding their proximity, the flight being over, a perfect stillness reigns, until we fire a shot, which alarms them, and those very near us take wing. Should the moon 'show forth her silver lining to the night,' it is the signal for them to move about from one part of the meadows to another, calling all the while they are on flight. During moonlight, too, in particular, they feed much in some districts in stubble and other fields. When shore-shooting on moonlight nights, I have raised Snipes from the edge of the flowing tide in Belfast Bay. The Wildfowl shooters state that during autumn and winter numbers of Snipes disperse themselves to feed every evening, but more especially by moonlight, over the extensive banks of *Zostera*, exposed by the retiring tide from either shore to the edge of the channel, along which also they may sometimes be observed feeding like ordinary shore-birds. One of my informants killed three at a shot on these banks by moonlight. They are not sought for here by shooters, but make known their presence by their peculiar cry when they rise on wing: very rarely a few remain during the day. About the little grassy pools on a low bank, over which the tide always flows at extreme high water, these birds have frequently been noticed. From all the low-lying night feeding-grounds visited in the manner described, they commonly take their leave very early in the morning; a few lazy ones, however, remaining until molested, when they fly direct to their upland, or retired haunts."

A writer in "Loudon's Magazine of Natural History," for 1829, states, that "in the latter end of October, and during the month of November, great numbers frequent the broads, (or river-lakes,) with which this county, (Norfolk,) abounds. They rest on beds of water-cresses, and the broken remains of the *Scirpus lacustris*, (which had previously been cut by the marshmen, under the name of bolders, for chair-bottoms,) and the *Typha latifolia*, (*vulgo*, Gladdon,) and *Sparganium ramosum*, (*vulgo*, Black-weed,) which are used by

coopers to put between the staves of casks. On the floating remains of these and other aquatic plants, they lie in great numbers, and are to be approached only by the means of a boat. In the early part of a morning, when the whiteness of a hoar frost renders the Snipes visible, the marshmen secrete themselves in a small boat behind a neighbouring reed-bush, and shoot at them sitting upon these broken weeds, and have sometimes the good fortune to kill many at a shot. In the latter part of November they gradually take their departure, and, except a few stragglers, are not to be met with before the months of February and March in the following spring."

Snipes are monogamous, and pairing takes place very early, occasionally as soon as the end of February, or beginning of March, but usually not till the end of the latter month, or early in April; at which time the male Snipe serenades his mate with two distinct notes, differing as widely from each other as from the cry they utter at other times. The one note may be compared to the repetition of the word 'tinker, tinker,' uttered in a sharp, shrill tone, as the bird ascends in its flight; the other, uttered as he descends, is somewhat similar to the bleating of a lamb, only in a deeper tone, and accompanied with a violent vibration of the wings." It is from this latter note that the Snipe derives its name of Heather-bleater; and various conjectures have been made as to the way in which it is produced by the bird; some, as Selby, Macgillivray, etc.—high authorities in matters ornithological—considering that it is produced by some peculiar vibration of the wings; others look upon it as effected by the vocal organs. The question is still undecided; but we are inclined to think the latter the more probable explanation; for it is heard at a much greater distance than we can imagine it possible any noise produced only by the vibration of the wings of so small a bird could be heard; namely, from a quarter to half a mile.

On this point, Mr. William R. Fisher, of 5, Verulam Buildings, Gray's Inn, has written as follows in the "Zoologist:"—"Two of your correspondents have called in question Mr. Bree's assertion, that the sound produced by the Common Snipe is sometimes emitted whilst the bird is on the ground. This noise has been described by various writers under the somewhat opposite names of 'drumming,' 'humming,' 'bleating,' and 'whorring.' I do not mean in any manner to dispute Mr. Atkinson's assertion as to the powers of ventriloquism possessed by birds; but the fact is, that the Snipe produces *two* distinct sounds; the one, which, as Mr. Atkinson observes, much resembles the buzzing of a large bee, I have only heard when the bird was in the air, and descending rapidly; the other, possibly that referred to by Mr. Bree, under the term 'whorring,' I have thought to be in some degree similar to that produced by the sharpening of a saw, but with little of the unpleasant harshness; and I can state with certainty, from the most careful observation, that during the time of its emission, the Snipe is not in the air, but on the ground. I may add, that having on one occasion approached sufficiently near to obtain a full view of the bird,

I was able to see that its production was unaccompanied by any motion of the wings."

The more common note, and one which is heard whenever a Snipe is sprung, has been compared to the word 'chissick,' repeated with a lisp. On such occasions it is the note of alarm, but it is also used at other times when the bird is undisturbed.

The old notion that Snipes lived by suction is now quite exploded; something far more substantial than anything attainable by that process, falls to their lot. The bill of the Snipe is one of the most beautifully contrived structures that can well be imagined, and is most admirably adapted to its necessities and mode of procuring food. If the beak is soaked in water for a few days, the cuticle, or outside skin, will readily peel off, and the beak itself will be exhibited. The enlarged end of this will be found to be most beautifully reticulated; having numerous elevated lines enclosing six-sided cells. The object of this curious provision is, there can be no doubt, to afford a greater surface for the expansion of the nervous filaments which supply the beak with sensation; the beak, particularly the extremity, being thus rendered extremely sensitive to the slightest external impression, is able to detect worms and other animals when below the surface of the ground, where a large portion of the Snipe's food is obtained, and which could never be procured, were it dependent on its eyes only for finding the creatures on which it feeds.

In procuring its food, the Snipe forces its bill into the soft, muddy ground, to a greater or less depth; sometimes even the whole bill will be immersed, as is proved by seeing mud on the feathers of the forehead of dead birds; the delicately sensitive skin which covers the beak, and forms a nervous cushion at the end, instantly betrays any unfortunate worm, or other creature that may come in contact with it, and it is instantly seized and eaten. In this way it picks up most of its food, and as Snipes are very generally in most excellent condition, we may infer that it finds little difficulty in procuring an ample supply of insect life. Digestion appears to be very rapidly accomplished, for frequently but little is found in the stomach, if examined—the powerful gizzard and gastric juice having ground up and dissolved the last-taken food. At different times the following digestible items have been found in their mouths or stomachs:—Worms of all kinds and sizes; caterpillars of beetles and other insects; small shell-snails; some vegetable substances; small seeds of one of the sedges or reeds; other small seeds; and two instances are mentioned by Mr. Thompson, in which a full-grown horseleech was found in the stomach. Add to these numerous small pieces of stone or gravel, and a good idea of the substances picked up by the Snipes may be formed.

In sporting phraseology, we say of Snipes that we spring them, when we put them up; we talk of a couple, or a couple and a half of Snipes; and when in small flocks we say a wisp of Snipes.

It is a well-known fact that Snipes, and indeed, we believe, all wild birds, are fatter, and in better condition after a few days frost, than either before or after its lengthened

continuance. Sir H. Davy's idea that this arose from their haunting only warm springs at such times, where worms are abundant, cannot be the case; at least we venture to think so. We are inclined to look upon this fact, with White, of Selborne, as depending upon the slight check which the insensible perspiration receives on such occasions, and which, we believe, produces the effect named.

Incubation is completed at an early period; the gentleman from whom we have quoted above, states that he has shot "young Snipes, strong on the wing, as early as the last week in May." Mr. Thompson mentions young Snipes being sprung as early as the 18th. of April, on the Belfast mountains, in 1832. These are certainly very early dates for young Snipes to be so far advanced as to be able to fly, and they will seldom be found in that condition much before the middle of June, except when the spring has been unusually early and mild. On such occasions it is probable there will be two broods reared the same year.

As soon as the young birds are excluded from the egg, they are able to run about, and follow the mother.

The nest of the Snipe is usually placed under some tuft of grass or sedge, upon some little piece of raised ground or hillock, where it will be free from moisture; it consists of a slight excavation, with a few dry blades of grass or heath as a lining. In this are deposited usually four eggs, but rarely five. These are in colour of a pale greenish or yellowish white, mottled at the larger end with brown of two or three shades. They measure in length one inch and a half, by one inch and one line in breadth.

The Snipe may be readily tamed, and C. Cogswell, Esq., M. D., of Warrington, gives the following interesting account of one, which he kept for some time in captivity:—"On Friday, the 30th. of October, 1847, while some men were out in the fields, in this neighbourhood, amusing themselves with catching small birds with a fly-net, they secured a full-grown Snipe, which came into my possession on the following day. The head was partially denuded of feathers, in consequence of the bird having struggled against the bars of a cage, through impatience at being confined. However, it made no effort to escape when held in the hand, and would even stand quietly on the knee, drink water out of a glass, and fish up worms from the bottom. I have now had this singular pet for more than two months, and, to all appearance, it is perfectly reconciled to its novel mode of life. During the late continuance of severe frost, there seemed every probability of its dying of hunger, as earthworms were not to be procured; and, like the specimen noticed by Mr. Yarrell, it at first refused to take any other kind of nourishment; however necessity soon prevailed, insomuch that the raw flesh of the hare and rabbit, together with tripe cut into narrow strips, have been taken into favour, but the ordinary kinds of butchers' meat are rejected. Earthworms remain decidedly the favourite article of diet, and of these it consumes a quart in three or four days. The habits of this creature

are surprisingly familiar, considering its commonly-supposed irreclaimable nature. During the night it reposes quietly in a cage, standing on one leg, with the head under the wing. By day, however, a desire to be enlarged is signified by an incessant striking of the bill and head against its prison wires. When released, it flies about the rooms and passages, walks on the table, is pleased at being noticed by those about him, and is on terms of great intimacy with a little spaniel lap-dog. No situation seems to accord so well with the animal's ideas of comfort as a place on a stool before the fire. Thus accommodated to its liking, and especially if at the same time fondled with the voice and hand, or enjoying the close proximity of its canine associate, it emits a subdued whistling note, sometimes, but very rarely, varied with an approach to a twitter. The food is usually given to it in a glass of water. Wherever the vessel is placed, all that is requisite to secure prompt attendance, is to scrape against the edge with a metallic substance. In feeding, it has great difficulty in seizing a worm, or any substance of similar form, that may happen to be lying on a flat surface. After repeated unsuccessful attempts, the morsel is at last got lengthwise between the mandibles, and disappears.

Strangers are readily distinguished from the people of the house, as shown by an evident difference of manner, indicative of alarm, manifested in their presence. Should any one be too rude in his advances, the bird, in endeavouring to avoid him, has a peculiar way of erecting the tail feathers, and turning them all in the opposite direction. It likes to be kept clean, and devotes frequent attention to the smooth and orderly appearance of the plumage. Although, in the opinion, at least, of Milne Edwards, the visage of the genus *Scolopax* bears the stamp of stupidity, (*Leur aspect dénote la stupidité*;) some of the foregoing circumstances indicate the possession of as large a share of intelligence on the part of the present convert to civilization, as most of the feathered race are capable of testifying, by their actions, to our apprehension. The specimen is now, January 8th., 1847, in the Earl of Derby's aviary, at Knowsley."

Varieties of the Snipe now and then occur, usually of a white, or cream-colour, either plain or mottled with light brown. Mr. Thompson records a curious variety, which had several times fallen under his notice:—"In the winter of 1831-32, several crested Snipes were shot in the bogs near the town just named, (Belfast,) by three of my sporting acquaintances, to the gun of one of whom two or three fell on the same day in the King's Moss. The crest of one which came under my inspection, extended for nine lines from the lower portion of the entire back of the head in a horizontal manner. Close to the head only, the feathers were brown and black, all the rest being white; this crest arose from a warty protuberance. It is extraordinary that so many with crests should occur about the same time, as I had not before, nor have I since met with any but a single individual, (in December, 1841,) having such an appendage. This specimen exhibited a row of feathers projecting in a drooping manner four lines from the lower part of the

back of the head; the portion of them which projected beyond the ordinary plumage were of a white colour."

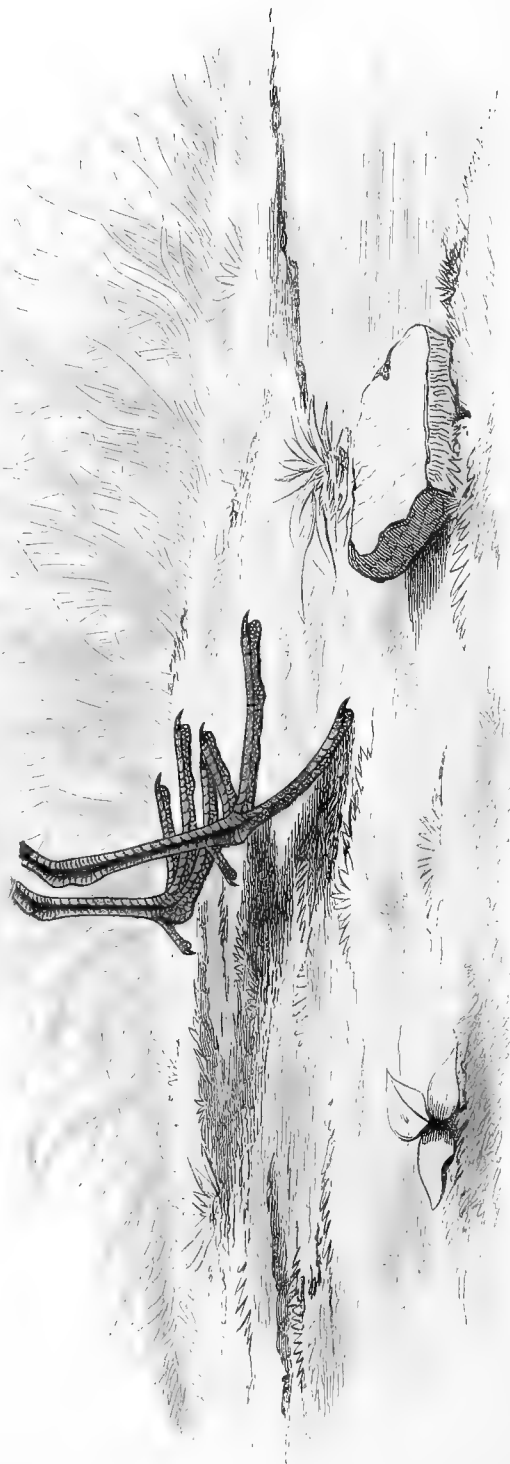
The bill, which is two inches and three-quarters long, and straight, the lower mandible about a tenth of an inch shorter than the upper one, is of a light brown, much darker at the point; reddish at the base. Irides, nearly black; top of head, brown black, mottled with pale yellow brown, and having a central streak of yellow brown running from the forehead to the nape. From each nostril, running backwards over the eye, is a broad stripe of yellow brown; and extending from the eye to the gape is a streak of brown. Cheeks, yellow brown, mottled with darker brown; under each eye is a crescentic band of brown, the convexity upwards; chin and upper throat, brownish or yellowish white. Back and sides of neck, light yellowish brown, mottled with darker brown, from the centre of each feather being dark; centre of back, rich black, slightly mottled with light yellow brown; lower back, generally covered by the long tertials, is brownish black, each feather edged with white. Scapulars and long tertials are black, broadly edged with distinct light yellow brown; forming two light lines down the back from the shoulders; lower neck and breast, grayish brown, each feather with a darker spot in the centre; lower breast, abdomen, and vent, pure white; primaries, brown black. The tail, which consists of fourteen feathers, is black, having a broad band of bright ferruginous colour extending across the tip, in the two centre feathers about half an inch wide, but gradually increasing to the sides, when it is nearly an inch in width; the extreme tips are paler, and inside this is a narrow black band running across all the feathers; the outer feathers are also mottled with ferruginous. Upper tail coverts, light reddish or yellowish brown, narrowly barred with black in zigzag lines. Legs and feet, greenish gray.

The weight of the Snipe is from four to five ounces, but if very fat it will occasionally exceed this weight.

Extreme length, eleven inches and one-third. Expanse of wings, seventeen inches.

The above description is taken from a fine specimen shot near York, just at the commencement of the breeding-season.

A variety of the Common Snipe has been described as a distinct species under the name of *Scolopax Brehmi*; differing only in the comparative length of the tail feathers. We cannot look upon these birds as anything but the Common Snipe.



JACK SNIPE.

JUDCOCK. 8

<i>Scolopax gallinula</i>,	.	.	.	.	.	LINNÆUS.
<i>Becassine sourde</i>,	.	.	.	.	.	TEMMINCK.

Scolopax, from *Scolops*—A stake sharpened at one end, from the form of its bill. *Gallinula*, a diminutive of *Gallina*—A hen.

THIS elegant little Snipe, although generally considered to be less common than the preceding species, is not only by no means rare, but is very generally distributed over the whole of England, Scotland, and Ireland, in places suited to its habits. Under ordinary circumstances, it is only a winter visitant to these shores, arriving from about the middle of September to the middle of October, and remaining with us until the end of March, or beginning of April; by this time many will have begun to assume their breeding plumage, which adds greatly to the beauty and brightness of their appearance.

The Jack Snipe breeds throughout the whole of Northern Europe, in Russia as far south as St. Petersburg; and is only a winter visitor to the southern countries, but extends its migration even to "Sicily and Malta."

From its small size it is not in such esteem for the table as the Common Snipe; but in flavour we consider it as being quite equal to that most excellent bird. It is dressed in the same way as the Woodcock, and the other Snipes, on a toast, with the trail in.

In its habits it is more solitary than the Common Snipe, for although two or more may be put up from near the same place, they do not often rise together, and rarely, if ever, are found in wisps, or small flocks, except, perhaps, at the time of assembling for migration.

As bearing upon the fact of the Jack Snipe collecting in flocks, preparatory to migration, we quote the following from Mr. Thompson's "Natural History of Ireland." He says, "Major Walker, of Belmont, near Wexford, states that the Jack Snipe arrives there in autumn, about a week before the Woodcock; and that in the mountain of Forth both species gather in numbers before taking their departure northwards in the spring. I

never heard of the Jack Snipe thus congregating elsewhere." We are not aware of any other record of a similar occurrence.

The flight of the Jack Snipe, when disturbed, is seldom to any distance, and before springing, it will frequently almost allow itself to be trodden upon, so closely does it lie. After rising, and flying a short distance, it will drop suddenly to the ground, and there again lie very close; indeed it can rarely be induced to take a flight of any considerable length, until it has been repeatedly disturbed. Soft, boggy ground, with an ample growth of rough grass, sedge, and marshy plants, is a favourite resort of the Jack Snipe during the day; and it is, with difficulty, driven from such excellent shelter. On rising it utters no note.

They will, however, occasionally occur in places where we should least expect to meet with them. Thus we are informed by the Reverend W. Waldo Cooper, of West Rasen Rectory, Lincolnshire, that on the 16th. of November, 1853, he saw a Jack Snipe killed in the middle of Toft plantation, which is an old one, nearly square, and containing about ten acres.

Its food consists, on the authority of Sir Humphrey Davy, of "smaller insects than the Common Snipe; small white larvæ, such as are found in black bogs, are its favourite food; but I have generally found seeds in its stomach—once hempseed; and always gravel."

With respect to the nesting of the Jack Snipe in this country, much pains has been taken by Mr. Yarrell in collecting evidence; but as yet nothing satisfactory has been proved in the affirmative, at least as regards England. Several instances are mentioned in which the Jack Snipe has been procured in the summer months; and eggs, purporting to be those of this bird, have on several occasions been shown, but these have, we believe, always turned out to be the eggs of some of the other *Scolopacidæ*. In Ireland, however, these birds have, though rarely, been obtained during the summer in the breeding plumage; and Mr. Watters, in his "Natural History of the Birds of Ireland," makes the following statement, which is certainly in favour of some remaining to breed in these countries. He says, "Having observed specimens obtained in the months of June, July, and August, in the rich plumage of the nuptial season, (in one of which the feathers of the breast were wanting,) it is not improbable that, like the Woodcock, it may breed with us in limited numbers."

Mr. Thompson also states that "Mr. R. Ball has met with it in the Dublin mountains at midsummer; and a friend of his once shot several individuals there early in August. Different persons have told me, (without supplying proof,) of its breeding in certain localities; but the Dunlin has often been mistaken for it on the moors in the breeding-season. On the following testimony of Mr. G. Jackson, gamekeeper, (communicated in May, 1849,) I, however, feel certain of its having bred:—"I have known some few instances of the Jack Snipe breeding in this country. In the year 1834, I found a nest containing

four eggs, and the old bird sitting on them, in a large swampy bog, about three miles from the old town of Ballyhannis, (county Mayo,) the property of Lord Dillon. The following year I found two young birds near the village of Kilkelly, in the same county, and also the property of that nobleman. The old bird was first seen fluttering about before the pointers to decoy them from the young. I have found them, I think, in two or three other instances, but cannot fix the time: the above I have noted in a diary I am in the habit of keeping of any remarkable event.’”

We know of no other instance on record, where the old bird was found sitting on the eggs; and the eggs of many of the birds of this family are so much alike in size and colour, that a mistake may very easily be made, where the old birds are not seen at the same time.

The eggs, which are two or three in number, have a ground colour of yellowish olive, spotted with two shades of brown at the thick end. They measure one inch and a quarter in length by ten lines in breadth; and like those of the rest of this family, are large in proportion to the size of the bird.

In the adult male the bill is dark brown at the point, of a lighter reddish brown colour towards the base, and measures about one inch and a half in length. Irides, dark brown; over the eye, from the bill to the back of the head, is a broad streak of pale brownish yellow, with a central black line from over the eye to the back of the head. From the bill to the eye, and under it to the back of the head, is a band of dark brown; forehead and top of head, dark brown; cheeks, nearly white, at the lower part edged with a narrow line of dark brown; sides of neck and breast, yellowish white, with black markings in the centre of each feather. Back, black, reflecting purple and green; the feathers tipped with white, and with broad margins of pale ochre yellow, which forms four lines along the back; the centre of the feathers mottled with reddish brown. Primaries and secondaries, grayish black; the secondaries tipped with white; tertials, brownish black, mottled with reddish brown, edged with light gray. Tail coverts, brown, with yellow brown edges; tail feathers, twelve in number, blackish brown, with pale reddish brown edges; lower breast, belly, and under parts, pure white; axillary feathers, white, marked with gray. Legs and toes, greenish gray; claws, black.

It would appear, however, that the colour of the legs sometimes varies, probably dependent upon age. Mr. W. Thompson, when passing a shop in Belfast, where a number of Jack Snipes were exposed for sale, on the 28th. of January, 1837, saw “one with flesh-coloured legs and toes; and on inspection of the whole lot, found the legs varying from the ordinary greenish gray, to a decided flesh-colour; those exhibiting the latter were supposed to be the young of the year. In other respects the birds seemed alike, but the plumage had received too rough usage to be properly examined.” The ordinary colour of the legs, however, is, as above stated, greenish gray.

The female may be known by being rather larger in size than the other sex; and by the plumage wanting the rich brilliancy of that of the male.

The young birds want the iridescent colours on the back.

In weight it seldom exceeds two ounces and a quarter.

The extreme length is from eight inches to eight inches and a half.



BROWN SNIFE

BROWN SNIPE.

BROWN LONG-BEAK. RED-BREASTED SNIPE. GRAY SNIPE.

<i>Macrorhamphus griseus</i>,	.	.	.	.	.	LEACH.
<i>Scolopax grisea</i>,	.	.	.	.	.	MONTAGU.
<i>Scolopax Novæboracensis</i>,	.	.	.	.	.	WILSON.
<i>Becassine punctuée</i>,	.	.	.	.	.	TEMMINCK.

Macrorhamphus. *Makros*—Long. *Ramphos*—A beak. *Griseus*—From the French *Gris*—Gray.

THIS is an extremely rare accidental straggler to the shores of Great Britain. It was first noticed as a distinct species by Montagu, who obtained his specimen on the Devonshire coast in its winter dress, in October, 1801. This specimen is, we believe, in the British Museum. Another was procured near Yarmouth, in Norfolk, about 1827, in the summer plumage. A third was shot near Carlisle, and fell into the hands of Mr. Heysham, of that place. Three or four other specimens have since been obtained in England; but it has never been recognised either in Ireland or Scotland.

It has occurred in Sweden.

Its natural habitat, however, appears to be the coast of America, breeding in the north, even to the Arctic circle, and wintering in the tropics.

It is therefore a migratory bird, and visits the coasts of the United States in April on its way to its breeding stations, and again in autumn when returning south for the winter.

In the United States, it occurs plentifully at the above times, and is greatly prized by the gunners. Wilson says, "Of all our sea-side Snipes, it is the most numerous, and the most delicious for the table. From these circumstances, and the crowded manner in which it flies and settles, it is the most eagerly sought after by our gunners, who send them to market in great numbers."

Unlike our own Snipes, the Brown Long-beak frequents the sea-shore, preferring soft, muddy situations near the sea, and also following the tide as it retires, after the manner of many of our shore birds. Alexander Wilson, speaking of this Snipe, says, "The Red-breasted Snipe arrives on the sea-coast of New Jersey early in April; is seldom or never

seen inland. Early in May it proceeds to the north to breed, and returns by the latter part of July, or beginning of August. During its stay here, it flies in flocks, sometimes very high, and has then a loud and shrill whistle, making many evolutions over the marshes; forming, dividing, and re-uniting. They sometimes settle in such numbers, and so close together, that eighty-five have been shot at one discharge of a musket. They spring from the marshes with a loud, twirling whistle, generally rising high, and making several circuitous manœuvres in the air, before they descend. They frequent the sand bars and mud flats at low water, in search of food; and being less suspicious of a boat than of a person on shore, are easily approached by this medium, and shot down in great numbers. They usually keep by themselves, being very numerous; are in excellent order for the table in September; and on the approach of winter retire to the south."

Of its food, Wilson states that "their stomachs contained masses of those small snail shells that lie in millions on the salt marshes." When feeding on the flats left uncovered by the tide, it probably feeds on the small crustacea and other insects, so numerous in such situations.

In the summer, the plumage above is marked with black, cut into by narrow waves of brownish yellow; the rump and tail coverts are white, the tip of each feather marked with a crescent-formed spot of black on the tip, and barred diagonally with the same colour; the tail is also white, slightly tinted with rufous, and with all the feathers barred with black. Beneath, the throat, neck, breast, and flanks are orange brown, each feather tipped and barred with black; these colours gradually disappear downwards, and the centre of the belly, with the vent, are pure white.

In the winter the plumage is of a grayish brown on the head and neck, deeper on the back and wings, and these, in some states, have the feathers edged with paler margins. There is a tinge of rufous on the breast, but the lower part and the belly, with the chin, are white. The tail and its coverts are similar in all states, a slightly deeper rufous tinge on the former during summer. The axillary feathers are white, barred with black; quills are deep hair brown; shafts of the first broad and white. It may be observed, that, from the month of April until winter, various intermediate states of plumage are passed through, often very beautiful.

The young exhibit a good deal of rufous on the under parts, when in their first feathers. (Jardine.)

The weight of this bird is about three ounces and a quarter.

In length it measures from ten to eleven inches. The bill measures two inches and a quarter to two inches and a half.



SABINE'S SNIFE.

SABINE'S SNIPE.

BLACK SNIPE.

<i>Scolopax Sabini</i>,	.	.	.	.	.	.	VIGORS.
<i>Bécassine Sabine</i>,	.	.	.	.	.	.	TEMMINCK.

Scolopax. Skolops—A stake sharpened at one end, from the form of its bill. *Sabini*—Sabine's.

THE first specimen of this Snipe which is recorded as having been obtained in these countries, was shot by the Reverend Charles Doyne, of Portarlinton, on the 22nd. of August, 1822, in Ireland, in Queen's County. With respect to this bird, Mr. N. A. Vigors says, "This species is at once distinguished from every other European species of *Scolopax*, by the total absence of white from its plumage, or of any of those lighter tints of ferruginous yellow, which extend more or less in stripes along the head and back of them all. In this respect, it exhibits a strong resemblance to the *Scolopax saturata* of Dr. Horsfield, from which, however, it sufficiently differs in its general proportions; and I find no description of any other extra European species of true *Scolopax* which at all approaches it in this character of its plumage. In the number of the tail feathers again, which amounts to twelve, it differs from *Scolopax major*, which has sixteen, and from *Scolopax gallinago*, which has fourteen: it agrees, however, in this point with *Scolopax gallinula*, which also has but twelve: but it never can be confounded with that bird, from the great disproportion between the essential characters of both; the bill alone of *S. Sabini* exceeding that of the latter species by one-third of its length. In the relative length and strength of the tarsi, it equally differs from all. These members, although stouter than those of *S. gallinago* fall short of them by three-twentieths of an inch; they are much weaker, on the other hand, than those of *S. major*, although they nearly equal them in length. In general appearance it bears a greater resemblance to *S. rusticola*, than to the other European *Scolopaces*, but it may immediately be recognised as belonging to a different station in the genus; the two exterior toes being united at the base for a short distance, as in the greater number of the congeneric species; while those of *S. rusticola* are divided to the origin."

A second specimen was shot by Captain Bonham, of the 10th. Hussars, who wrote the

following account of its capture to Mr. Thompson:—"I shot it at the end of November, or beginning of December, 1827, about a mile from Garvagh, county of Londonderry, on the side of a high heathery hill rising from a large *flow*, or uncut turf bog: Common Snipes were rising at the same place. The bird was tame, and did not squeak like the generality of Snipes, and, at first, in consequence of its dark colour, I took it for a Water-Rail. Being rather too anxious, I fired three times before killing it; after each of the first two shots, it pitched quite near again, like the Jack Snipe." In all, Mr. Thompson has collected records of ten of these birds being shot in Ireland; they occurred in Westmeath, King's County, Clare, Tipperary, and Kerry. It is stated by Mr. Watters, who published in 1853, that "fourteen authenticated instances" had then "occurred in various counties (in Ireland,) during autumn and winter. In the fine collection of birds in the University Museum, as many as four of these rare Snipe are preserved, all of which were obtained by the assiduity of Dr. R. Ball, who collected them. In the course of Mr. R. Glennon's practice, he has preserved no less than six of this species, which were familiarly known to the person who obtained them, as 'Black Snipe.'"

Of one shot near Clonmel, Mr. R. Davis, Jun., of Clonmel, gives the following account in the "Zoologist:"—"I have just received a specimen of Sabine's Snipe; it was shot on the 31st. of last month, (August,) in a bog near New Birmingham, about sixteen miles from this place, by J. Morton, Esq., of this town. It was in company with a Common Snipe, and rose with it. Its cry was similar to that of the Common, and but for this cry it would have escaped, being, on first rising, mistaken for a Water-Rail, and allowed to go a considerable distance. It appears to be a male bird, and was moulting. Yarrell says the tail consists of twelve feathers, and that two of the toes are united for a short distance; in this specimen they are divided to the origin, and the tail now consists of thirteen feathers; some grains of shot passed through these, and probably cut away another feather. I have preserved the skin."

In England it has occurred only four or five times—once near Rochester; again somewhere near London; twice in Hampshire. Of one of these, Mr. P. L. Sclater, of Hoddington House, Odiham, says, that "in looking over a collection of stuffed birds, at a gamekeeper's near here, I found a specimen of Sabine's Snipe, (*S. Sabini*,) which he considered to be a 'Black Snipe,' and merely a variety. I told him to keep the bird for me, but when I went again for it, it was gone. He said he shot it on Basing Moor," in Hampshire. Once near Morpeth, in Northumberland: this last was, we believe, shot by Mr. Selby.

It has not been recorded as occurring in Scotland.

It is a very curious fact, that rare as this bird is in this country, it is totally unknown on the European continent, or elsewhere: we are consequently without any information as to its nest or eggs, and the locality where incubation is effected. A conjecture was

thrown out by Mr. Thompson, that it was only a variety of the Common Snipe, (*Scolopax gallinago*.) The evidence which he offers in support of this idea, certainly seems rather strong; but until a careful examination and dissection is made of a recent specimen, it is quite impossible to speak decisively upon this point. The following measurements taken from two of the stuffed Irish specimens by Mr. Thompson, and from three of the Common Snipe, two by Mr. Thompson, and one by ourselves, may perhaps tend in some measure to aid in elucidating the subject:—

	Scolopax Sabini.				Scolopax gallinago.			
	inches.	lines.	inches.	lines.	inches.	lines.	inches.	lines.
Total length.....	11	3	10	8	11	3	11	4
Total length of bill above.....	2	7	2	9	2	10½	do.	2 8
Total length of tarsus.....	1	3½	1	3½	1	4	.....	1 4
Total length of middle toe and nail.....	1	4	1	4	1	5	do.	1 5
Total length of wing from Carpus.....	5	3	5	0	5	0	.....	5 1

The measurements of the third *S. gallinago*, are taken from our specimen, which was shot in the spring, consequently an old bird in full plumage. It will be readily seen how very closely the measurements of all approach each other. The bill in our specimen of *S. gallinago* is much nearer in length that of *S. Sabini* than Mr. Thompson's specimens. Mr. Yarrell gives the number of tail feathers as twelve, but the Irish specimen, shot near Clonmel, had thirteen; and we presume when in perfect plumage would have had fourteen.

The first killed specimen, which is now in the Museum of the London Zoological Society, was shot in August, and was probably moulting. This may account for the absence of two of the feathers.

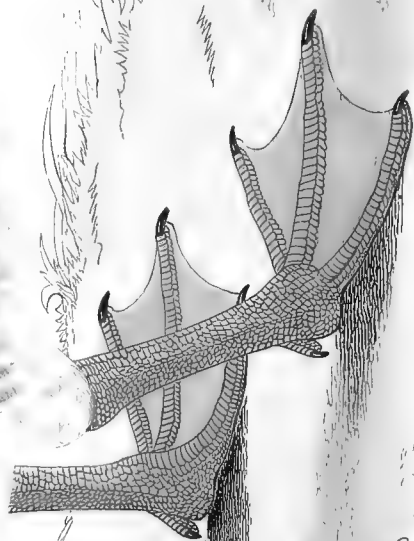
If this point were satisfactorily settled, there would seem to be scarcely sufficient grounds for supposing this bird to be anything more than a dark variety of the Common Snipe. Mere colour, at any rate of a plain kind, as black, white, or gray, cannot alone constitute a species. We do not enter on this subject with a view to prove this to be merely a variety, but to direct the attention of future observers to the more carefully minute examination of any specimen that may occur. The length of the intestines and of the cæca should be ascertained, and all the external measurements should be taken, along with the weight, before the bird is skinned. The colour of the iris, as well as of the legs, feet, and claws, should be noted.

The habits of Sabine's Snipe do not appear to differ from those of the common kind. It is found in the same haunts, and along with them; and on one occasion rose in company with *S. gallinago*; on this occasion, too, its cry was the same; though on another occasion, (Captain Bonham's specimen,) it rose without the usual "squeak."

The bill, which is two inches and three-quarters in length, is dusky, olive brown at the base; irides, dark brown. The upper parts are of a dusky brown, with narrow bands of pale yellowish brown; primaries, dusky, the shafts black; under parts, "rufous

dusky brown, alternately barred with pale yellow brown." The tail, which consists of fourteen feathers, (Yarrell says twelve,) is black for half its length; the terminal part being ferruginous, with dusky bars. Tibia, feathered to the knees; legs, dusky.

Total length, about eleven inches and a quarter.



GRAY-LAG GOOSE.

WILD GOOSE.

<i>Anser ferus</i>,	.	.	.	.	.	.	MONTAGU.
" <i>palustris</i>,	.	.	.	.	.	.	FLEMING.
<i>Anas anser</i>,	.	.	.	.	.	.	PENNANT.
" <i>ferus</i>,	.	.	.	.	.	.	MONTAGU.
<i>Oie cendrée ou première</i>,	.	.	.	.	.	.	TEMMINCK.

Anser—A Goose. *Ferus*—Wild.

OWING to more than one species of Wild Goose having been frequently mistaken for the Gray-Lag Goose, it has been commonly supposed to be of much more frequent occurrence in these islands than is really the case, it being in fact one of our rarest species. The Gray-Lag Goose would seem to be the origin from whence most of our domestic breed has been obtained; though another species, the White-fronted Goose also appears to have some close affinity to, at any rate, some portions of the domesticated birds; tame birds occasionally exhibiting the white forehead from which the White-fronted Goose derives its name. Mr. Yarrell has also found in some tame Geese the windpipe flattened as in the White-fronted Goose; while generally it is cylindrical, as in the Gray-Lag Goose. There can, however, hardly be a doubt that we are almost wholly indebted to the present species for our domesticated bird, for the wild and the tame will breed together, and the offspring is prolific. Certainly many of the tame breed exhibit a most remarkable similarity in colouring and general appearance to the wild bird, as may be seen by a comparison with our plate.

In reference to this point, a very interesting fact is thus mentioned by Mr. Yarrell:—"At the first exhibition of domestic poultry and water-fowl at the gardens of the Zoological Society, in the Regent's Park, at the end of May, 1845, there was a fine specimen of the Wild Gray-Lag Goose, sent from India by Mr. Blyth to Mr. Bartlett, who exhibited the bird. The next coop contained the finest and the heaviest pair of Domestic Geese, sent by Mr. Nolan, from Dublin. It was most obvious that these domestic birds were derived from the Gray-Lag Goose. The pinky flesh-colour of the beak and the white

nail; the distribution of the markings of the plumage generally; the large blue-gray space on the anterior portion of the wing; the flesh-colour of the legs and feet; and the voice were alike in both."

As a winter visitor, the Gray-Lag Goose has been met with in many of our counties; though on account of its having been very frequently confounded with other species, it is difficult to decide, with certainty, in which it has been procured. It is not only, however, a winter visitor, but, according to Mr. C. St. John, breeds regularly in Sutherlandshire. He states that he found numerous nests of the Gray-lag Goose, (not the Bean Goose,) in some islands in Loch Maddie, in Sutherlandshire; also in Loch Laighal, and Loch Urigil; and William Mordant Edward Milner, Esq., M. P. for York, in his account of the Birds of Sutherland and Rosshire, says that he found the Gray-Lag Goose and eggs on Lock Shin, Loch Assynt, and Loch Naver.

In Ireland, the Gray-Lag Goose is of rare occurrence in the winter. It has only been obtained in the midland counties, as Westmeath, Connaught, and King's County; and is unknown either in the north or south.

They breed in Norway along the coasts; also on the south-eastern shores of Sweden. They occur in France, Germany, Holland, Italy, and Corfu, in the winter.

As an article of food, the Gray-Lag Goose, *when in good condition*, is most excellent: its tame descendant is so well known at our tables, that little need be said on the subject. We may, however, mention that epicures consider the liver of a fat Goose as a most delicious dish; and in order to enlarge it to its utmost extent, some have even gone so far as to produce, artificially, this state in the shortest time, by cruelly putting out the poor bird's eyes, which was then nailed by the feet to a board, and kept near a fire. The state thus produced is doubtless one of disease, and we envy not the epicure's dish when obtained in this way, or when of this kind: we would as soon eat carrion. The ancients acted more mercifully, for they merely kept the Goose in a dark room, and fed it with figs, which were thought to improve the flavour of the bird.

In its habits the Wild Goose is exceedingly shy, and is quite proverbial for its vigilance. When feeding, during the day-time, it is never off its guard; for while the flock is busy picking the short grass, or gathering the scattered grains of corn on the stubble field, one solitary bird is appointed to keep watch and guard; and on the slightest appearance of an enemy, or any suspicious object, he warns the others by a peculiar cry, and the whole body takes wing, and seeks more secure quarters. To stalk a Wild Goose is a feat requiring much acuteness and dexterity; yet it may be done, should the ground prove favourable, and the approach be possible against the wind; for this is the only direction in which you have any chance of getting within shot of these wary birds. Even during the night, when they have retired to the water for repose, one sleepless sentinel still keeps watch, and his warning cry is an instant signal for his sleeping companions

to be wide awake, and provide for their safety by flight. Their mode of flight is well known. They fly through the air at a great height, either in single or Indian file, or in two converging lines, which are constantly changing their position and form, so as to resemble the letters V or Y.

The flight of the Gray-Lag Goose is effected by quick, but very slight strokes of the wings; and when the leading bird is fatigued, he retires to the rear, while his place is supplied by another; the leader of the band having the most difficult and arduous post. The flocks vary in number from eight or ten to forty or fifty, or more.

It has been remarked by Mr. G. Jackson, gamekeeper, as recorded by Mr. Thompson, that in Connaught, Gray-Lag Geese "never mingle with the others, nor do I recollect ever seeing more than seven or eight in a flock, and oftener three or four. They frequent the upland pastures and cultivated lands more than the other species. They were rather scarce; but a few, at least, were to be found every winter. From their being larger, and considered a better Goose, there was more attention paid to them by the fowlers. I have shot many of them. In the winter of 1834, I killed a Gray-Lag Goose with a piece of linen cloth sewed round one leg; it did not appear to be the manufacture of this country."

The note is the same as that of the tame Goose, and is too well known to require particular description.

The food of the Gray-Lag Goose consists chiefly of grass, which it nips off very closely; the tender shoots of young wheat, oats, or barley; and, when attainable, the seeds of these plants, which are shed in harvest-time, and remain afterwards upon the stubble-fields.

The Gray-Lag Goose is monogamous.

The nest is placed near the shore on some of the little islets so common in our northern lakes. In Sutherlandshire, Mr. C. St. John says the young are hatched by the middle of May.

The eggs, which vary from four to seven in number, are smooth and shining, and of a yellow ivory white colour. They measure in length three inches and a line by two inches and a line in breadth.

Incubation is completed in four weeks.

A curious variety of the Gray-Lag Goose is recorded by Messrs. Gurney and Fisher, in the "Zoologist." This bird, which was a male, was shot at Horsey, in Norfolk, about the middle of November, 1847; it was marked with black about the belly, and between the legs; the markings much resembling those found on the breast of the White-fronted Goose, but somewhat less decided.

With respect to the production of hybrids, Mr. Yarrell has recorded that "the Gray-Lag Goose has bred with the Hooper Swan at the Jardin des Plantes in Paris. The Gray-Lag Goose, in a domestic state, has also produced young in two instances by union

with the Knobbed, or Swan Goose, (*Anser cygnoides*;) twice with the Canada Goose; and once with the Bernicle Goose. It has been stated that when a union takes place between two different species of the genus *Anser*, both having light-coloured legs, or both having black legs, the young are prolific; but when produced between two birds, one of which has light-coloured legs, the other black legs, the young are not prolific." How far this statement will be borne out by future observers, we are not prepared to say; but similarity in the colour of the legs would seem to indicate closely allied species.

The adult Gray-Lag Goose has the beak of a pink flesh-colour, the horny nail at the extremity of each mandible white; the irides, brown; the head, nape, back of the neck, and the upper part of the back, ash brown, the latter-named part with lighter-coloured edges; inner portion of the wings, scapulars, and tertials, lead gray, with broad and lighter gray-coloured margins. The point of the wing, both sets of upper wing coverts, and all the feathers on the primary portion of the wing, except the quill feathers, beyond the first three, very light bluish gray; the three outer quill feathers also light gray; the rest dark lead gray—all with white shafts. The lower part of the back, and the rump, uniform light bluish gray; upper tail coverts, white; tail feathers, lead gray, tipped with white; chin, neck in front, and the breast, of a lighter gray colour than the back of the neck; the belly, and all the under surface of the body, white; sides, flanks, and thighs, barred with ash colour and grayish white; under tail coverts, and the under surface of the tail feathers, white. Legs, toes, and membranes, dull flesh-colour; the claws, black.

Very old birds have irregular blackish markings over the lower part of the breast and belly, according to Temminck and Mr. Thompson.

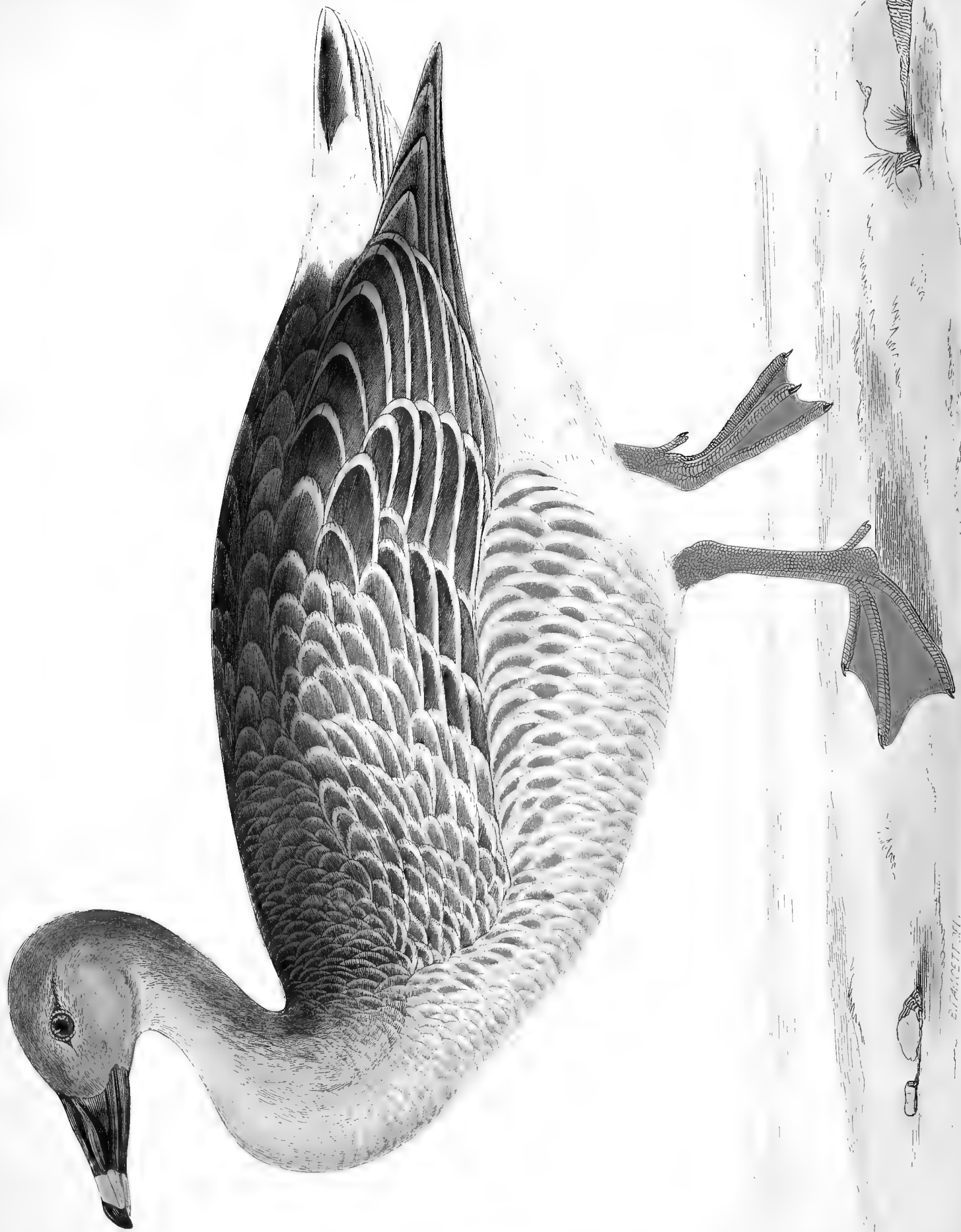
The females are rather smaller than the males.

The young birds differ only in having all the tints of a darker shade.

Both sexes have a hard callous knob at the point of the wing.

The length of the male is about thirty-five inches. The female measures but thirty inches.

We are indebted to Mr. D. Graham, the talented and trustworthy taxidermist of York, for the specimen from which our plate is taken.



BEAN GOOSE.

ENGELSTADT.

BEAN GOOSE.

WILD GOOSE.

<i>Anser segetum,</i>	.	.	.	.	.	JENYNS.
<i>Anser ferus,</i>	.	.	.	.	.	FLEMING.
<i>Anas segetum,</i>	.	.	.	.	.	PENNANT.
<i>Oie vulgaire,</i>	.	.	.	.	.	TEMMINCK.

Anser—A Goose.*Segetum*—Of corn-fields.

THIS handsome Goose is one of the most common of its tribe in its occurrence in this country, and we have no doubt that it has very commonly been considered the Gray-Lag Goose, by sportsmen and others who were not well acquainted with the distinctive characters of the two species. To most of this country it is only a winter visitant, and disappears with the first approach of spring. In Sutherlandshire it may, however, be found during the breeding-season; and numerous pairs have been seen with their broods on Loch Shin, Loch Laighal, and Loch Naver. It also breeds in the Hebrides, in Lewis, and Harris. Mr. Yarrell states, that "a few pairs, it is said, breed annually in Sunbiggin Tarn, near Orton, in Westmorland."

In Ireland it is common in winter.

On the continent, this Goose is found in Northern Europe, and in France, Holland, and Germany, plentifully; it also occurs in Italy and Spain.

The habits of the Bean Goose lead it to frequent corn-fields, more than its congeners; and so well is this known in France, that it has obtained the provincial name of "Harvest Goose;" and Mr. Yarrell states that he has been informed, that as early as August they are to be found in the corn-fields in Gloucestershire. They, however, more commonly remain on the coast, and make daily excursions inland to their feeding-grounds, returning at night to roost upon the water, or upon some distant sand-bank. In the depth of winter they often take up their quarters on "extensive flat tracts, such as holm or meadow pasture, wet marshy ground, often at a considerable elevation, and on the borders of pastoral lands." When feeding in the stubbles, among small inclosures, they are, of course, more easily approached by the sportsman, than at other times; for

their watchful suspicion can only extend to the surrounding hedges, and these will often afford most excellent shelter for the shooter.

The following curious circumstance is recorded by Mr. Watters, in his "History of the Birds of Ireland."—"A countryman in the county of Longford, having observed, for several successive evenings, a large open drain regularly frequented by flocks of these birds, (Bean Geese,) felt sadly perplexed for the want of a gun, either to beg or borrow, until at last he recollected the existence of an old Spanish gun, which had remained a fixture under the thatch for one half century at least; it was immediately taken down, minus lock and stock, and fastened upon a piece of timber hardly suited for the purpose. Having all in readiness, the same evening he was creeping cautiously against the wind, towards a bank he had erected in the drain; succeeding in reaching it, the barrel was quietly rested upon it, and a piece of lighted touch-paper, (tinder,) applied to the touch-hole; when, to use his own words, 'she went off beautifully,' so much so, that eleven Geese were lying dead and dying in the drain, whence all were carried to his cot in a sack which he had brought for the purpose."

It is monogamous.

Respecting the habits of the Bean Goose while feeding, Mr. Thompson states, that a relative of his "noted (December 2nd., 1832,) that he saw, through his telescope, a flock of fifteen Wild Geese, feeding in the bog-meadows, apparently on grass. During an hour that he and a companion observed them, they all continued feeding but one, which, acting as sentinel, would look around for a little time, and, if no cause of alarm appeared, would begin to feed; another bird then played a similar part, so that one of the flock always kept on the watch."

The following interesting account of a tamed male Bean Goose is given by Mr. Thompson:—"At Springmount, near Clough, a male Bean Goose, slightly wounded in the wing, was placed with a flock of Common Geese, from among whom he at once selected a partner, and thenceforth paid no attention to any others of her sex. He was evidently most unhappy when separated from her, even in winter, and on one occasion was the means of saving her life. The cook, being ordered to kill one of the Geese, laid hold of the first that came to hand, which happened to be the Wild Gander's partner, when so remarkably vehement were his cries, that even the uplifted hand of the murderess was stayed; and some members of the family, with others of the household, hurrying to the scene of uproar, the cause of the bird's anxiety was discovered, and the intended victim set at liberty. This was told to me in January, 1838, and no farther attempts have since been made on the fair one's life. In November, 1848, they were removed to a new residence, where they continue apparently as happy as Geese can be. For several successive years after this pair became associated, the Goose laid a full complement of eggs, and sat on them even beyond the usual time; the Gander keeping company at her

side during the interesting period, but, unfortunately, no issue appeared. On a subsequent year, the Goose sat closely on an empty nest in the bog, her partner never leaving the immediate vicinity, and guarding her most courageously. To test his courage, a person once lifted the Goose off the nest, and threw her into the water, when her brave and faithful partner instantly advanced, making a loud, hissing noise, and, flying at the offender, struck him with his feet and wings with all his might.

During the last summer, (1849,) the Goose laid a few eggs, but was too much disturbed by dogs to incubate them long. To the calls of his wild brethren passing overhead, the Gander habitually replied; and, in one instance, it was feared he had bade adieu to the place, as he took wing and joined a flock high in the air; but, after holding a little converse with them, he returned, like a true lover, to his mate. This Gander, perhaps in right of a higher descent than his associates, who merely 'walk the earth,' at once, when put with the Common Geese, took the lead of the herd, sometimes numbering fifty or more, always heading them, and keeping about two yards in advance. None of the tame Ganders had ever the bad taste to dispute the chieftainship with him, and he proved a trustworthy guardian, as when his associates made an occasional sally into a corn-field, he took his station on the fence, and sounded an alarm when the enemy was seen approaching."

The food of the Bean Goose is, as we have before said, corn of all kinds, and the young and tender shoots of corn, grass, and, as noted by Mr. Thompson, the leaves of the Irish shamrock; he also states that others were killed which had been feeding on the hips or fruit of a small species of mountain rose. Watercress was also eaten by another.

The nest is placed upon the small islets, both in inland lakes and also near the sea-shore. Mr. Selby says, speaking of the islets in Loch Laighal, "We saw several old birds, and the nests that had been used, which are concealed in heath upwards of three feet in height, that covers the islands. The eggs were all hatched, and most of the young had betaken themselves to the neighbouring moors, where they continue till able to fly, secreting themselves, when disturbed, in the highest heather." The young birds, when they take to the water, are very expert divers, and are with difficulty captured, even by the aid of a boat.

The eggs, which are from five to seven in number, are of the same colour as those of the Gray-Lag Goose, but of a larger size, measuring three inches and five lines in length, by two inches and five lines in breadth.

A hybrid brood between the Bean Goose and the Pink-footed Goose was produced in St. James' Park, London, as mentioned by Yarrell.

In the adult the bill, which is two inches and a half long from the gape, is orange yellow; the base, edges, and nail, black; head and neck, yellowish brown; back and scapulars, brownish gray, the feathers edged with grayish white; rump, dark brown; upper

tail coverts, white. Tail, consisting of sixteen feathers, dark brown, edged with white; primaries, black at the tips, shading into gray at the base; the shafts, white. Secondaries, tertials, and wing coverts, gray brown; breast and belly, yellowish white; vent and under tail coverts, pure white. Legs and feet, orange; claws, black.

In young birds the colours are darker, but less distinct, and the neck has a slight orange tinge.

When in good condition it will sometimes weigh as much as eight pounds and a half, or even more.

In length it measures from thirty-three to thirty-four inches.



PINK-FOOTED GOOSE.

PINK-FOOTED GOOSE.

<i>Anser brachyrhynchus,</i>	.	.	.	.	.	BAILLON.
<i>Anser phænicopus,</i>	.	.	.	.	.	BARTLETT.
<i>Oie à bec court,</i>	.	.	.	.	.	TEMMINCK.

Anser—A Goose. *Brachus*—Short. *Rugchos*—A beak.

THIS Goose was first, in this country, described as distinct from the two preceding species, by Mr. Bartlett, in 1839; it had, however, been noticed some years before, by M. Baillon, on the continent, and was named by him as above. It is frequently met with in the London and other markets, and we have a note, dated January 25th., 1848, stating that we saw several specimens which had been procured about that period, in the York market; and it has frequently been procured there since.

It occurs commonly in Scotland, breeds "in great numbers in the small inlands of the sound of Harris, as well as those of the interior of North Uist." It is also met with in East Lothian, where, along with the Bean Goose, it causes much injury to the fields of winter wheat, and young clover, by eating the tender blades. Mr. Archibald Hepburn, of Whittingham, states that at Travent and Gladsmuir, common rat-traps are often set in their haunts.

It is not known to have occurred in Ireland.

We are unacquainted with the habits of the Pink-footed Goose; little or nothing having as yet been recorded respecting them.

It is monogamous.

With respect to its food, Mr. C. St. John mentions, that, in Sutherlandshire, it feeds, in the winter, on the bulbous roots of a coarse, red-coloured grass, which grows in peat mosses. When feeding on it they become very fat and heavy, and have no strong or unpleasant flavour. It also feeds on grain and young blades of wheat and grass.

It is stated by Mr. Macgillivray, that pairing takes place about the middle of May, in the outer Hebrides; the birds being seen in flocks at the commencement of the month.

The eggs are pure white, and measure, in length, three inches and an eighth, by two inches and a quarter in breadth.

In the adult the bill measures one inch and five-eighths in length; narrow and small

towards the tip; from the base to the nostrils it is black; the remainder, pink, except the nail which is black: irides, dark brown. Head and neck, cinereous brown; lower neck, lighter. Back, scapulars, wing coverts, and tertials, gray brown, edged and tipped with yellowish white. Rump, dark gray; upper tail coverts, pure white. Tail feathers, fourteen in number, gray, edged and tipped with white; primaries, bluish gray, the shafts white; secondaries, darker—nearly black. Feathers of the breast and belly, yellowish gray, with lighter edges; those on the sides and thighs are gray, with broad brownish white tips. Vent, under tail coverts, and under surface of tail, white. Legs and feet, livid pink; claws, black.

The length of the adult male is two feet four to two feet five inches.



WHITE-FRONTED GOOSE.

WHITE-FRONTED GOOSE.

LAUGHING GOOSE. TORTOISE-SHELL GOOSE. MOUNTAIN GOOSE.

<i>Anser albifrons,</i>	.	.	.	.	.	.	PENNANT.
<i>Anser erythropus,</i>	.	.	.	.	.	.	SELBY.
<i>Anas erythropus,</i>	.	.	.	.	.	.	LINNÆUS.
<i>Oie rieuse, ou à front blanc,</i>	.	.	.	.	.	.	TEMMINCK.

Anser—A Goose. *Albus*—White. *Frons*—The forehead.

ALTHOUGH not our commonest Wild Goose, the White-fronted Goose is by no means rare; occurring frequently in large flocks. It has been obtained in many of our English counties; all along the south coast; in Cambridgeshire, Oxfordshire, Norfolk, Yorkshire, Durham, and Northumberland.

In Scotland it has been procured in Dumfriesshire, Edinburgh, and is a rare winter visitor in Sutherlandshire.

In Ireland it is very common, and arrives there early in the season, according to Mr. J. Watters.

In Lapland and Sweden it is very abundant. It also occurs in Italy, Holland, France, and Germany; and has also been procured in Japan, Northern and Arctic America, and in Kentucky.

As an article of food it is, like the other Geese already described, excellent when in good condition.

The White-fronted Goose resembles the Gray-Lag and Bean Geese in its general habits, but frequents more elevated or hilly districts. They have been procured from meadows, turnip fields, and marshy grounds, in different parts of the country.

Its note resembles, in some measure, the laugh of a man, from which it has derived one of its names. It is stated by Dr. Richardson that in Arctic America the Indians imitate its call by patting the mouth with the hand while repeating the syllable 'wah.'

It breeds, as stated by Dr. Richardson, on the coasts and islands of the Arctic Sea, north of the 67th. parallel of latitude. It also breeds abundantly in Lapland and Sweden, and probably Northern Russia.

The eggs are white, of a buffy shade, and measure two inches and ten lines in length, by one inch and eleven lines in breadth.

This Goose is readily tamed, and has bred in the London Zoological Gardens.

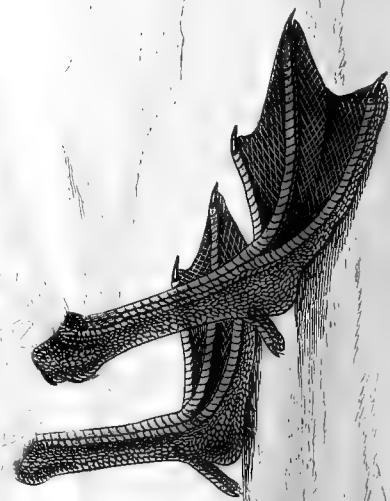
"An immature one, brought from North America, and sent to the Belfast Botanic Garden," says Mr. Thompson, "was particularly fond of human society, probably from the kindness it had experienced on shipboard, and would at all times leave its pond to join men at work in the vicinity. But its gala day was when a military band attended at the Garden, and from two to three hundred people were assembled. So soon as they broke up into groups, after the cessation of each piece of music, the Goose took the part of clown on such occasions at a theatre, and was 'the observed of all observers,' as it paid its respects to party after party by running towards them with its neck outstretched almost on a level with the ground. On one of these occasions, in particular, it caused much amusement by following, like an humble servitor, at the heels of the lady of highest rank present, (a marchioness,) for, perhaps, a couple of hours, and bestowing no attention or boldness on any other party. In justice to the Goose, we must, perhaps, rather attribute this partiality to something attractive in the dress of the lady, than to any unworthy tuft-hunting propensity. After being about a year in the Garden, the Goose disappeared, and not much to the curator's regret, as it shewed little regard to the 'Arrangement of British Herbaceous Plants' in the vicinity of its pond being preserved intact, having often levied considerable contributions from the soft and more tender kinds; among the saxifrages, sometimes not a leaf was left to tell of their former whereabouts."

It has been known to mate with the Bernicle Goose, and to bring out a brood of hybrids.

The adult has the bill flesh-coloured; the nail, white; irides, dark brown; forehead, or base of upper mandible, white, bounded posteriorly by a dark line, which shades into a brownish ash, which is the colour of the head and neck. The upper parts have the feathers dark gray brown, tipped with light yellowish brown; primaries, nearly black; secondaries, the same. Upper tail coverts, white; tail, dark gray, tipped with white; beneath, the lower part of the neck shades into the pale brownish white of the breast and belly, which again shades into a pure white on the vent and under tail coverts; the lower breast, belly, and sides are irregularly barred and marked with black in both sexes. Legs and feet, with the webs, orange; claws, whitish horn.

In young birds the plumage "is more uniform in colour, and rather dark; the feathers at the base of the upper mandible are of a darker brown than those of the other parts of the head; the nail and point of the beak, light brown. The pale brown feathers on the breast are uniform in colour, without any dark patches or bars."—Yarrell.

The length of the adult male is about two feet three inches.



BERNICLE GOOSE.

BERNICLE GOOSE.

BERNACLE GOOSE. BARNICLE GOOSE. WHITE-FACED BERNICLE.
NORWAY BERNICLE. LAND BARNACLE.

<i>Anser leucopsis,</i>	.	.	.	.	.	JENYNS.
<i>Anser bernicla,</i>	.	.	.	.	.	FLEMING.
<i>Anas erythropus,</i>	.	.	.	.	.	PENNANT.
<i>Oie bernache,</i>	.	.	.	.	.	TEMMINCK.

Anser—A Goose. *Leucopsis*. *Leukos*—White. *Ops*—The face.

THIS remarkably handsome Goose has been the subject of strange fancies on the part of the ignorant or imaginative of former days; we have not space for all the curious legends respecting them, and must content ourselves with stating that books were written, and illustrated by engravings, to prove that a certain sort of willow tree, especially those growing in the island of Pomona, one of the Orkneys, gave origin to the Bernicle Goose, by producing swellings at the ends of the branches, which, in due time, grew into these birds. Gesner and Aldrovandus, together with Bishop Leslie and Olaus Magnus, may be named as authors who espoused this strange fable, and wrote in its support. Others ridiculed this notion, and asserted that these birds derived their origin from certain sea-worms which were observed in timber that had been long floating about in the ocean. We need not, however, give all the details which were advanced in support of this curious fancy; and we shall therefore at once proceed to mention those points in the history of this fine bird, which have been ascertained by naturalists more modern than those we have just been alluding to.

The Bernicle Goose is only a winter visitor to these islands, arriving during severe frost from the high northern latitudes, in which it breeds. It seems to frequent the western coasts in preference to the eastern, where it is only very casually seen. It has been procured in Cambridgeshire, Cornwall, Devon, Dorset, Norfolk, Northumberland, Oxfordshire, Sussex, Lancashire, and Yorkshire. With respect to its occurrence in the last-named county, we are informed by T. S. Rudd, Esq., of Redcar, that a fine specimen of the Bernicle Goose was shot in Coatham Marsh, on the 1st. of October,

1853. The person who shot it stated that the flock consisted of nine birds, but that as only seven were seen the following day, some one else had probably shot another. They soon after disappeared entirely. Mr. Rudd states that he never before saw or heard of the Bernicle Goose being obtained in that part of the country.

In Scotland, it is not uncommon on the shores of the Solway Firth; is procured along the western coast, and is rare in Sutherlandshire.

In Ireland it occurs pretty regularly, but rarely all along the eastern and southern shores; at Lurgan Green, in the county of Louth, however, Mr. Thompson states, that "immense numbers of Bernacle spend all the year, except the period appropriated to the reproduction of their species; they are about five months absent, from the middle of April to that of September."

On the continent it is found in all the northern countries, in Germany, France, and Holland, in Iceland and the Ferroe Islands. In Japan, Northern Asia, and probably America.

As an article of food this Goose is much esteemed.

In its habits it is more maritime than those species we have already described; it obtains its food, which consists of grasses and maritime plants, upon those parts of the shore which are more or less covered by high tides, salt marshes, and bogs, resting during the day on the retired shores or exposed sand-banks. It is very shy and wary. Mr. Watters says, that "only on one occasion has the Bernacle come under our observation, in January, 1850, when a flock, consisting of twenty birds, passed closely overhead, in the vicinity of the Pigeon House Wall, (Dublin,) all calling in unison; the sound was singularly pleasing, resembling some distant murmuring."

The food found in the stomach of one examined by Mr. Thompson, consisted of the Irish Shamrock, *Trifolium repens*, pieces of *Ranunculi*, and grasses.

The breeding stations of the Bernicle Goose are at present involved in some obscurity, but Mr. Yarrell suspects the shores of the White Sea may be one.

In confinement, it has bred in St. James' Park, London. The eggs were white, measuring in length two inches and three-quarters, by one inch and seven-eighths in breadth.

In the adult the bill, which measures one inch and three-eighths in length, is black; from the bill to the eye a broad line of black. The forehead, over the eye, cheeks, and chin, white; top of the head, nape, neck, and breast, deep glossy black. Back, scapulars, wing coverts, and tertials, french gray, each feather tipped with white, inside which is a black crescent. Rump, black; upper tail coverts, white; tail, black. Primaries, black at the tips, shading into gray at the base. Lower breast and belly, silvery white; side feathers, gray, tipped with white. Thigh feathers, black, tipped with white. Legs and feet, black.

In young birds the cheeks have some black feathers. The feathers on the back and wing coverts have the ends tinged with red. Legs not pure black.

The length of the adult male is two feet one inch.



BRENT GOOSE.

BRENT GOOSE.

BRAND GOOSE. WARE GOOSE. BARNICLE. HARRA GOOSE, (in Shetland.)

<i>Anser torquatus,</i>	.	.	.	.	.	JENYNS.
<i>Anser brenta,</i>	.	.	.	.	.	WILLOUGHBY.
<i>Anas bernicla,</i>	.	.	.	.	.	PENNANT.
<i>Oie cravant,</i>	.	.	.	.	.	TEMMINCK.

Anser—A Goose. *Torquatus*—That weareth a collar.

It is singular that this Goose, so very distinct as a species, should ever have been confounded with the true Bernicle, and yet such is the case, and not always by the most illiterate. It has probably arisen from the country people in some districts, calling it by the name of Barnicle, though they are aware of the distinction between the two species, calling the true Barnicle the "Land Barnicle," at least it is so in some parts of Ireland.

The Brent Goose is a winter visitant to our shores, and is more decidedly maritime in its habits than any of the Geese already described, very rarely being found inland, and but seldom approaching the shore, even when wounded. It frequents sand-banks exposed by the tide, and is chiefly found on such coasts as are well supplied with *Zostera marina*, a marine flowering plant growing in creeks and shoals, where large tracts are left bare at low water. It is found in greater or less numbers all round our coasts, in such places as we have named; being found in Dorset, Hampshire, Norfolk, Suffolk, Lincoln, Yorkshire, Northumberland, and other counties; but chiefly frequenting the Eastern coasts. In Scotland it is frequent; and in Ireland also plentiful.

It is found in all Northern Europe and America.

When in good condition the Brent Goose is considered good eating.

They assemble, in favourite localities, in incredible numbers, often literally blackening the surface of the sand or water they are resting upon. They arrive in Belfast Bay from the 20th. to the end of August, and remain till the end of April, or early in May. In Northumberland they make their appearance early in October, and leave before April. They feed chiefly during the day-time, being but rarely known to do

so in the hours of the night. The night is usually spent asleep out at sea; while in the day-time, and with the earliest dawn of light, they betake themselves to their shallow feeding grounds near the shore. Mr. Thompson states that they are much more alarmed at the sight of a man's face than of his body. When put up, he states, that they invariably turn and fly against the wind; they ought therefore always to be approached down wind, and they will thus give the shooter a better chance of their flying within range, than if approached in any other direction. They are very wary, and not easy to be caught "napping." Their flight is in a somewhat irregular mass, not assuming the regular form of some of our other Wild Geese. Their note, when heard from a large flock, resembles the "music" of a pack of hounds in full cry. So much is this the case, that on one occasion, Mr. Thompson states, that his horse, surely an unprejudiced witness, on hearing it, showed all the symptoms of excitement usual when near a pack of hounds. They swim with great ease and speed, but never dive except at the last extremity. The wounded birds flock together, and are not easily separated.

The food consists of blades of *Zostera marina*; each blade being neatly folded up, when of sufficient length. The root of this plant is also eaten. According to Selby they also feed on the Green Sloke sea-weed, (*Ulva latissima*.)

They breed in the extreme north.

The eggs are of a grayish white colour, and measure two inches and three-quarters in length, by one inch and three-quarters in breadth.

They are said to breed in captivity, and are readily tamed.

In the adult male the bill, which is one inch and a half in length, is black; the nail, also black. Irides, nearly black; the head, neck, and upper breast, are dull black; on each side of the neck is a patch of white, with a few black feathers in it. Primaries and secondaries, black. Back, scapulars, wing coverts, and tertials, brownish black, the feathers edged with a lighter shade; rump, black. Upper tail coverts, white; tail, black. Lower breast and belly, blue gray, edges of feathers lighter. Vent and under tail coverts, white. Legs and feet, black.

Females are smaller, and browner than the males.

In length they measure about one foot nine inches.



RED-BREADED GOOSE.

RED-BREASTED GOOSE.

Anser ruficollis, LATHAM.
Oie à cou roux, TEMMINCK.

Anser—A Goose. *Rufus*—Red. *Collum*—A neck.

THIS handsome Goose, which appears to be of very rare occurrence in any country, has been obtained in seven or eight instances in England, mostly in the south. Thus it has been met with in Devon, Cambridge, Norfolk, near London, and near Berwick-on-Tweed.

In Scotland it is unknown.

In Ireland it is believed to have once occurred. Of this specimen Mr. Thompson says, "When in Dublin in March 1833, I was informed by a person to whom this species was well known, that about five years previously he had seen a specimen in the shop of Mr. Glennon; on inquiry of whom, I learned that the bird had been sent to him in a fresh state, to be preserved, but he was not aware where it had been killed. That it was procured on our coast is at least a fair inference."

It has occurred but once in France, once in Holland, and once in Germany. Twice in Scandinavia; and several times in Denmark. It is believed to breed on the extreme northern shores of Europe and Asia. It is mentioned by Yarrell, that "M. Menetries, in his 'Catalogue Raisonné of objects in Zoology,' observed by the naturalists attached to the Russian expedition to the vicinity of the Caucasus and the frontiers of Persia, says, that in 1828 a considerable flock of this species appeared at Leukoran, probably driven there by strong winds; they were so exhausted by fatigue that they were caught by hand, and many were preserved in captivity, to which they were easily reconciled. They always kept together, and uttered a gentle call-note when any one of their party separated from the others, or when a bird of prey hovered over them: this was the only sound that was heard. Of the food placed before them they preferred green vegetables to grain, and drank often." The above is the only scanty record that we have met with of the habits of this bird.

Of its nest or eggs we know nothing.

"In the adult bird the beak and the nail are almost black; (bill, reddish brown, with

the nail black,—Selby,) the irides, hazel, between the beak and the eye a white patch; round the eye, the top of the head, and down the back of the neck, dark brownish black; on the ear coverts an angular patch of chesnut, surrounded with white, ending in a white streak passing downwards; upper surface of the body and wings, very dark brown, almost black; wing coverts, edged with grayish white; upper tail coverts, white; primaries and tail feathers, black; throat, dark brown; neck and upper part of the breast, rich chesnut red, ending with a collar of white: lower part of the breast, black; belly, vent, and under tail coverts, white; the flanks barred with dark brown; legs, toes, and their membranes, dark brown, almost black.”—Yarrell.

It measures in length from twenty-one to twenty-two inches.



EGYPTIAN GOOSE.

VULPANSER OF THE ANCIENTS.

<i>Anser Ægyptiacus</i>,	.	.	.	.	.	LINNÆUS.
<i>Anser Egyptiacus</i>,	.	.	.	.	.	JENYNS.
<i>Chenalopez Egyptiaca</i>,	.	.	.	.	.	GOULD.
<i>Anas Egyptiaca</i>,	.	.	.	.	.	BEWICK.
<i>Oie Egyptienne</i>,	.	.	.	.	.	TEMMINCK.

Anser—A Goose. *Ægyptiacus*—Egyptian.

THE readiness with which this bird is tamed; and lives and breeds in confinement, has led to its introduction into many of our parks, and other private grounds. From these, many have strayed into the surrounding country, and, having been shot, have figured in the local papers. In addition to these, however, many have occurred in an undoubtedly wild state; and the distance of their native haunts is no bar, certainly, to their migration to our shores. On one occasion, a flock of eighty birds of this species was seen in Hampshire. Dr. Scouler, of Glasgow, has also recorded the shooting, in November, 1832, of two females and one male, at Campsie, about seven miles from Glasgow, the plumage of which was in an extremely perfect condition, and unlike tame birds which had strayed. They have also been obtained in Somersetshire, near Bridgewater; in Norfolk and Dorsetshire; and in the Isle of Man. In 1846, five were seen in Romney Marsh, in Kent, but very wild, as recorded by Dr. Plomley. In 1848, two occurred in Sussex, in January; and are stated by William Borrer, Esq., Jun. to have exhibited all the appearance of being truly wild. It has been obtained several times near Oxford.

In Ireland it has been occasionally shot, but Mr. Thompson considers the specimens that have been obtained to have strayed from parks and preserves.

Its natural habitat is the whole of Africa.

The habits of this Goose do not appear to be naturally different from those of the other Geese; its wariness is very great, and led to one of its generic names being given to it, namely, *Chenalopez*, meaning a Fox-Goose; that is, exhibiting the cunning of the Fox.

As we have before said, it breeds readily in confinement. Its eggs are of a dull white, tinged with buff; and measure two inches and three-quarters in length, by two inches in breadth.

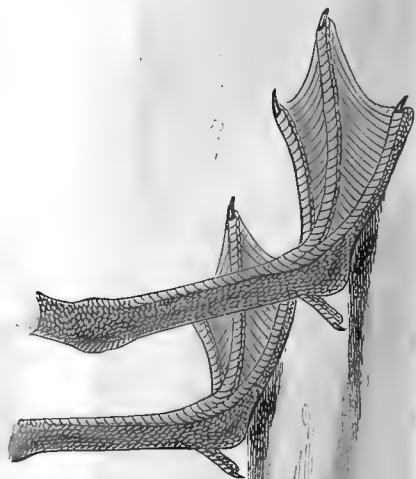
Hybrids have been bred between it and the Penguin Drake—a variety of the Common Duck; the eggs being productive. The hybrids paired together and produced eggs, which were unproductive. It has also bred with the Knobbed or Swan Gander, and the Spur-winged Gander.

In the adult, the bill is pale brown, having the base, edges, and nail of a much darker shade. Irides, yellow: around each eye is a patch of reddish brown. Cheeks, chin, and sides of the neck, yellowish or reddish white. Upper part of the head, back of neck, upper back, scapulars, and tertials, chesnut brown. Primaries, black; secondaries, of a changing green, tipped with black. Wing coverts, white; the lesser ones, tipped with black. Lower back, rump, upper tail coverts, and tail, black. Front of the neck, breast, and upper belly, pale reddish brown, with a patch of chesnut brown on the breast; lower part of belly, vent, and under tail coverts, pale brown. The legs, feet, and claws are pink. There is a blunt spur on the point of the carpal joint.

The female is like the male, but has the tints rather less bright.

The weight is about five pounds.

In length it measures from two feet two, to two feet four inches.



SPUR-WINGED GOOSE

SPUR-WINGED GOOSE.

GAMBO GOOSE.

<i>Anser Gambensis,</i>	.	.	.	.	.	.	BRISSON.
<i>Anas Gambensis,</i>	.	.	.	.	.	.	BEWICK.
<i>Plectropterus Gambensis,</i>	.	.	.	.	.	.	LEACH.

Anser—A Goose. *Gambensis*—Of the Gambia.

THE introduction of this bird, a native of North-western Africa, into the British list, depends upon the occurrence of a single specimen more than thirty years ago, and of which the following record occurs in the Synopsis of the Museum at Newcastle, by G. Fox, Esq.:—"When first seen, it was in a field adjoining the cliffs, at Port Wrinkle, a small fishing place, about four miles from St. Germain's, (Cornwall,) near which it remained for two or three days. Being several times disturbed by attempts to shoot it, it came more inland, to a low-situated farm, called Pool, and there associated with the Common Geese; but was wild, and immediately took wing upon being approached. Here it kept, to and fro, for a day or two; but being much disturbed, left, and came down upon the shore of the St. Germain's river, or estuary, when the following day, the 20th. of June, 1821, it was shot by Mr. John Brickford in a wheat field at Sconner, about a mile from St. Germain's. When killed it was in the most perfect state, having only one shot in the head. Some gentlemen who saw it the following day, requested him to let me, (Mr. Mewburn,) have it, which he promised; but though he knew I was a bird-stuffer, he had a wife, who, from some strange infatuation, thought she could stuff it; but being soon convinced of her inability, she cut off the wings for dusters, and threw the skin away; and it was not till three weeks afterwards that I heard of the circumstance, when I sent a servant, who brought it covered with mud, the head torn off, but luckily preserved, as also one wing, when I had it washed, and put it together as well as I was able. The skin, in this state, was obligingly forwarded to Newcastle by Mr. Mewburn, for Mr. Bewick's use, from whence it passed into Mr. R. Wingate's hands, who has most ably re-set it, and thus preserved one of the most uncommon ornithological rarities ever known in England."

But little seems to be known respecting the habits of this Goose; and we know nothing as to its nest or eggs.

Mr. Bewick's description of this bird, which is now in the Newcastle Museum, is as follows:—"The bill is reddish yellow, with a jointed protuberance on the base of the upper mandible. The upper part of the head and neck is dingy brown; the auriculars and sides of the throat are white, spotted with brown; the lower part of the neck, sides of the breast, and all the upper plumage appear black; but this colour is lost, particularly in the scapulars and tertials, which are most resplendently bronzed and glossed with brilliant green, and most of the outer webs of the feathers partake of the same hue; on the bend of the wings or wrist is placed a strong white horny spur turning upwards, about five-eighths of an inch in length, and pointing rather inwards; the whole of the edges of the wing, from the alula spuria to the elbow and shoulder, are white, all the under parts the same. This beautiful bird is nearly of the bulk of the Wild Goose, but its legs and toes are somewhat longer, and of a red or orange yellow."



CANADA GOOSE.

CRAVAT GOOSE. CANADA SWAN.

<i>Anser Canadensis</i> ,	STEPHENS.
<i>Anas Canadensis</i> ,	BEWICK.
<i>Cygnus Canadensis</i> ,	JENYNS.

Anser—A Goose. *Canadensis*—Canadian.

THIS very handsome bird is kept, like the Egyptian Goose, in a semi-domesticated state in many of our private waters, and most of the specimens shot in various parts of the country, are probably derived from these sources; besides these, however, many instances have occurred in which no such origin could be attributed to the birds obtained; and it is now generally allowed by ornithologists that these birds do come to our shores by the ordinary process of migration; but the natural haunts of this bird being North America, we could not expect any but occasional stragglers to make their appearance. They have been obtained in Cambridgeshire, Cornwall, Derby, Hampshire, Oxfordshire, and Yorkshire; in this county two fine specimens were shot at Skerne, on the 29th. of May, 1845, by Mr. W. Mosey, of that place. It has also occurred in the Scilly Islands, and probably in many other parts of the country.

In Scotland it has not been met with.

In Ireland it occasionally occurs in an apparently wild state.

As an article of food it is much esteemed in North America. Wilson says, "They are sold in the Philadelphia market at from seventy-five cents, to one dollar each; and are estimated to yield half a pound of feathers a-piece, which produces twenty-five or thirty cents more."

From the middle of August to that of October, the Canada Goose wings its way southwards to the United States of America; and during its flight over the various countries, it affords profitable sport to the gunners, who literally dot the country over in anticipation of a "Goose Harvest." One man, on a favourable day, will often kill two hundred.

In the spring they migrate again to the north, for the purpose of incubating in the extreme high latitudes. They are known to breed round the shores of Hudson's Bay; but they

go farther north than any part of Canada before nesting. Their vernal migration lasts from the middle of April to the middle of May. In their flight they go over land or water indiscriminately. They swim and dive with facility, and if winged in the water are difficult to catch. They roost mostly upon the land, but in very fine weather sometimes on the water. Their flight is heavy and laboured; usually in a straight line, or in two converging lines, as our own Wild Geese.

They are very readily tamed, and breed in captivity, and are prolific and valuable.

The following interesting anecdote is mentioned by Wilson:—"Mr. Platt, a respectable farmer on Long Island, being out shooting in one of the bays which, in that part of the country, abound with water-fowl, wounded a Wild Goose. Being wing-tipped, and unable to fly, he caught it, and brought it home alive. It proved to be a female; and turning it into his yard, with a flock of Tame Geese, it soon became quite tame and familiar, and in a little time its wounded wing entirely healed. In the following spring, when the Wild Geese migrate to the northward, a flock passed over Mr. Platt's barn-yard; and, just at the moment, their leader happening to sound his bugle-note, our Goose, in whom its new habits and enjoyments had not quite extinguished the love of liberty, remembering the well-known sound, spread its wings, mounted into the air, joined the travellers, and soon disappeared. In the succeeding autumn, the Wild Geese, as was usual, returned from the northward in great numbers, to pass the winter in our bays and rivers. Mr. Platt happened to be standing in his yard when a flock passed directly over his barn. At that instant, he observed three Geese detach themselves from the rest, and, after wheeling round several times, alight in the middle of the yard. Imagine his surprise and pleasure, when, by certain well-remembered signs, he recognised in one of the three his long-lost fugitive. It was she indeed! She had travelled many hundred miles to the lakes; had there hatched and reared her offspring; and had now returned with her little family to share with them the sweets of civilized life."

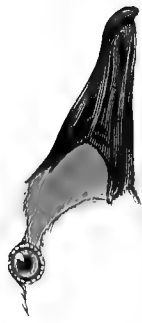
The eggs are six or seven in number, of a dull white, and measure three inches and a third in length, by two inches and a third in breadth.

In the adult the bill is black; irides, dark hazel; head and upper half of the neck, black, having a cravat of white extending from behind the ear coverts under the chin and throat; lower neck, white. Primaries, black, as long as the tail. Back, wing coverts, secondaries, and tertials, brown, each feather with a whitish tip; rump, black; upper tail coverts, white; tail, black. Breast and belly, pale brown. Vent and under tail coverts, white; flanks, pale ashy brown. Legs and feet, dark gray black.

Both sexes are alike.

The Canada Goose weighs "from ten to twelve, and sometimes fourteen pounds."

In length it measures full three feet. Dr. Richardson says three feet five or six inches.



HOOPER.

ELK. WHISTLING SWAN. WILD SWAN.

<i>Cygnus ferus</i>,	.	.	.	.	RAY.
<i>Cygnus musicus</i>,	.	.	.	.	BECHSTEIN.
<i>Anas cygnus</i>,	.	.	.	.	LINNÆUS.
<i>Anas ferus</i>,	.	.	.	.	BEWICK.
<i>Cygne sauvage</i>,	.	.	.	.	TEMMINCK.

Cygnus—A Swan.*Ferus*—Wild.

THIS Swan appears to be the “Wild Swan” *par excellence* of Great Britain, occurring during the winter months more frequently than any of the other species. In Ireland, however, on the contrary, another species, named in honour of our illustrious Bewick, seems to take its place in the comparative frequency of its occurrence.

The Hooper, being only a winter visitor to these islands, spends the breeding-season in the northern parts of Europe; being met with during the summer, in pairs, in Lapland and Russia. Mr. Low states that in his time it used to breed in Orkney. It is not known to occur out of Europe.

The flight of all the Wild Swans is much alike; the birds arranging themselves in the wedge-form, as the Wild Geese mostly do. During their flight, the Hoopers frequently may be heard repeating their loud-sounding ‘hoop.’ They fly with great rapidity when going “before the wind.”

When swimming, the Hooper does not elevate the plumes of its wings, as the Tame Swan does, nor does it arch and elegantly curve its neck, as is the custom of the domesticated bird, but carries it straight.

The Hooper is monogamous.

Its note resembles the syllable ‘hoop’ repeated many times; and when heard from a flock at some distance, is by no means an unmusical sound.

The food consists of a variety of grasses, water-plants, seeds, and roots.

Those who have had an opportunity of shooting these fine birds, say that they are not difficult to approach, until after having been fired at and disturbed. If struck in

the wing or head they are not difficult to bring down. If only wounded, they fight hard for their liberty, and will sometimes turn and attack the pursuer. The following humorous account of the capture of a winged Swan is given by Mr. C. St. John:—

“Just as it got dark a rushing noise was heard, and a pair of Swans skimmed rapidly over the old keeper’s head, and pitched in the water, making a monstrous wave. They did not see us, and immediately began to feed. It was getting dark, and the old man, not wishing to lose a chance, got up from his hiding-place, and ran quickly to the water’s edge, firing both barrels at the largest bird as it flew away. His gun was only loaded with No. 3, and the distance, as we afterwards found, was above forty yards. Both the Swans flew on for some distance, until we suddenly saw the wing of one give way, and down came the bird into the pool, which was of considerable size, although shallow. I had left my retriever at home to rest, and before I could stop him, in went the old man, and then began a chase, which I have seldom seen equalled. Although the water was shallow, the bottom was uneven; and every minute down went Donald head foremost. I called to him to let me shoot the bird, and leave it to drift to the shore; but all in vain. On he went, tumbling over and over, and the Swan swimming and struggling in the water close to him, making an immense splashing and noise. They got quite away from me; and I had nothing left but to sit down and watch the chase as well as I could through the approaching darkness. At last he hemmed the bird into a rushy corner of the loch, and caught her. But this was no sooner done, than the Swan, by her flapping and struggling, tripped him up, and got away again, leaving her antagonist flat in the water. Then, and not till then, he began to load his gun, which he had, to my great wonderment, contrived to carry all the time high over his head; but, of course, notwithstanding all his care, it had got quite wet, and would not go off; and the conflict ended at last by a lucky blow from the barrels, which stunned the Swan. I was amused at the boyish eagerness of so old a stager; particularly as we never lost a shot at Duck, or anything else, without his laying it to my fault. I *“had lifted my head too high,”* or done something else, showing my want of tact. The poor fellow was in a sad plight, being ducked to the skin all over with half-frozen water. However I made him walk quickly home, and he got no damage from his exploit. The Swan weighed eighteen pounds, and measured above seven feet from tip to tip. We found that many shots had struck the wing feathers without breaking them.”

An interesting incident in their domestic history is mentioned by Mr. Yarrell, and thus recorded by him:—“At the Gardens of the Zoological Society a pair of Hoopers bred on one of the islands in the summer of 1839, and again during this last season. A curious circumstance took place in reference to the brood of 1839.—The cygnets, when only a few days old, were sunning themselves on the margin of one of the islands, close to the deep water. The parent birds were swimming near. A Carrion Crow made a

descent, and struck at one of the cygnets; the old male Hooper came to the rescue in an instant, seized the Crow with his beak, pulled him into the water, and in spite of all his buffetings and resistance, held him there till he was dead."

A curious legend is current in some parts of Ireland respecting these birds; the following account of which we quote from Mr. Watters' "Natural History of the Birds of Ireland;" he says, "On the authority of Mr. Glennon, towards spring the small lakes in the county of Mayo are tenanted by flocks of these birds, congregated there preparatory to their return to those regions of snow, to which their plumage accords, and approximates so chastly in appearance; and strange to say, although they occur in considerable numbers at the time, they are never interfered with or molested by the peasants of the neighbourhood, on account of a tradition that the souls of virgins, who, whilst living, had been remarkable for the purity of their lives, were, after death, enshrined in the form of these birds, as emblematic of their purity and beatitude. For this reason they remain in safety, as it is also believed that whoever would be so unlucky as to meddle with them, would pay for his temerity by the forfeit of his life, ere the year had elapsed."

The Hooper seems to submit to confinement readily, and breeds when suitable localities are afforded to it; thus it has several times bred in the London Zoological Gardens, as well as at Petworth, the seat of Lord Egremont.

In this semi-domesticated state, the nest is of large size, placed near the water, and composed of a considerable quantity of sedge, grass, and rushes.

The eggs, two in number, measure four inches and one line in length, by two inches and one-third in breadth. They are of a pale brownish white colour. Incubation is said to occupy exactly six weeks.

The adult Hooper has the bill black at the point; the basal portion, yellow, and of a somewhat quadrangular shape; the yellow extending forwards along the lower edge of the upper mandible beyond the centre. The lore is also yellow. Irides, blackish. The whole plumage is pure white; but the head and upper neck are sometimes, probably in rather young birds, marked with narrow streaks of rufous brown. Tail feathers, twenty in number. The legs and feet are black.

The young birds are their first year of a pale brownish ash colour, but by their second winter they become pure white.

The length is from four feet eight inches to five feet; the expanse of the wings being about eight feet.

The weight varies from eighteen to twenty-seven pounds.

In the Hooper the trachea, after traversing the neck, and passing through the forked bone or merrythought, enters the keel of the breast-bone, which is double; and after running nearly its whole length, returns and enters the chest inside the forked bone, when it divides into two long bronchial tubes, one going to each lung.

BEWICK'S SWAN, (*Cygnus Bewickii.*) Yarrell.

UNTIL the year 1828, when this bird was first described by Mr. Yarrell as a distinct species, under its present very appropriate name, it had been confounded with the species last described; the differences which characterize it, are however so decided, that no mistake of the kind should in future occur. As far as at present known, it seems to visit Great Britain less frequently than the Hooper, while in Ireland it is met with much more commonly than that bird. I have records of several which have occurred in the neighbourhood of York; though it is certainly rare. Mr. C. St. John speaks of its being not uncommon in Sutherland in winter on any of the sea lochs.

When swimming it is said to carry itself more like a Goose than the Tame Swan, and when birds of this species have been slightly wounded, and placed in a pond along with other Swans, it has refused to associate with them; but readily joins a flock of Geese, and remains on friendly terms with them. It is more gentle in its habits than the Tame or Mute Swan, and is timid and easily frightened: it does not molest other water-fowl which may be kept on the same pond with it. They are graceful in their carriage on the land, which also they affect more than they do the water; contrary, in this respect, to the Tame Swan.

It is believed to be monogamous; for one which was wounded and unable to leave the pond in which it had been injured, was joined by one of the uninjured birds of the same flock, which remained with it for a considerable time; indeed until much frightened by a dog, when it took its departure.

Its note, according to Mr. Thompson, "chiefly uttered at the migratory periods, is a low deep-toned whistle *once* repeated."

As to its nidification, little or nothing is known. Mr. Yarrell has an egg which he thinks may be that of this species. "It is very like that of the Hooper, but smaller, of a pale brownish white; three inches seven lines long, by two inches six lines in breadth."

It has paired with the Black Swan, but no eggs were produced.

In the adult the bill is black, with a somewhat oval-shaped patch of orange yellow at the base, which is carried on to the eye. Irides, dark. The whole of the plumage is of a pure white. The tail feathers number twenty. The legs and feet are black.

In the young birds the plumage of the first year is brownish gray. In the second year, Mr. Yarrell states, that they acquire the pure white plumage, except the head and breast, which are strongly marked with rusty red. The base of the bill is of a lemon yellow; the irides orange. There is however some diversity of opinion as to the rust-colour on the head and breast, some thinking that they derive it from feeding among weeds which stain the feathers of that colour.

The weight of Bewick's Swan is about eleven or twelve pounds; but varying with the condition of the bird.

Its length is three feet ten inches.

In this bird the trachea is also curiously convoluted in the keel of the sternum; it enters the sternum outside the forked bone or merry-thought; the depth to which it penetrates this bone varies with the age of the bird; increasing as it gets older, till it reaches within half an inch of its posterior extremity; it then returns and enters the thorax: the two first divisions into bronchial tubes are very short.

MUTE, OR TAME SWAN, (*Cygnus olor*, of authors.)

THIS most graceful and ornamental bird has long been a semi-domesticated resident on the lakes and sheets of water in the parks of our noblemen and country gentlemen; and contributes greatly to the beauty of the scene. The time of its first introduction into this country is unknown; but at a very early date it was regarded as royal property, and various legislative enactments have at different times afforded protection to this lordly bird; we have not space however to enter into details respecting these, and must refer our readers to an article on the subject in the Penny Cyclopædia, where every necessary information is given, merely contenting ourselves with stating that the crown grants to individuals or corporations the power of placing certain distinguishing marks upon the beaks of these birds called Swan marks, by which each person's property may be readily known.

The Mute Swan is found wild in the whole of Europe, and probably Asia; breeding in the high latitudes of Russia and Siberia.

The Swan is esteemed as an article of food for the table, but it is only the young birds of the year that are usually cooked, the old birds being hard and tough. The Swan requires a good deal of judicious treatment on the part of the cook, to make it the delicacy it is considered by some to be.

Like the rest of its kind it is monogamus.

The habits of the Tame Swan are too well known to require much notice from us. The ornamental way in which it elevates its wing feathers, and arches its long neck when on the water is well known, while its awkward action when on the land is equally a matter of notoriety.

During the period of incubation, and indeed until late in the autumn, the male Swan becomes very fierce, and will with much boldness and violence, attack man or beast coming into his domain.

Its food consists chiefly, if not entirely, of vegetable matter; and Mr. Thompson relates his seeing a pair of Swans on one occasion busily engaged in rooting up potatoes in a field, and eating them.

The following interesting record of the dying moments of a favourite Swan, we extract from the "Second Series of Essays on Natural History," by our valued friend Charles Waterton, Esq., whose ardent love for Natural History is only equalled by his care in having ocular demonstration for every fact vouched for as such by him:—

"Once I had an opportunity, which rarely occurs, of being with a Swan in its last illness. Although I gave no credence to the extravagant notion which antiquity had entertained of melody from the mouth of the dying Swan, still I felt anxious to hear some plaintive sound or other, some soft inflection of the voice, which might tend to justify that notion in a small degree. But I was disappointed.

This poor Swan was a great favourite, and had been the pride of the lake time out of mind. Those who spend their life in the country, and pay attention to the ordinary movements of birds, will easily observe a change in them, whenever their health is on the decline. I perceived that the plumage of this Swan put on a weather-beaten appearance, and that the bird itself no longer raised the feathers of his wings, as he passed through the water before me. Judging that he was unwell, I gave orders that he should be supplied with bread and boiled potatoes. Of these he ate sparingly, and in a day or two he changed his quarters, probably for want of sufficient shelter from the wind. Having found his way down to the stables, he got upon a small fishpond there, out of the reach of storms. From this time he never fended for food, but he continued to take a little white bread now and then from my hand. At last he refused this; and then he left the water for good and all, and sat down on the margin of the pond, with evident signs of near-approaching death. He soon became too weak to support his long neck in an upright position. He nodded, and then tried to recover himself, and then nodded again, and again held up his head; till at last, quite enfeebled and worn out, his head fell gently on the grass, his wings became expanded a trifle or so, and he died whilst I was looking on. This was in the afternoon, and I had every facility of watching his departing hour, for I was attending the masons, some thirty yards from the pond to which the Swan had retired. He never even uttered his wonted cry, nor so much as a sound, to indicate what he felt within."

The nest, which is a large structure, composed of straw, grass, rushes, reeds, and other water-side plants, is placed near the edge of the water, and, if an island is attainable, it is always chosen, as being more secure from the attacks of an enemy.

The eggs, which vary from two to six or seven in number, are of a dull greenish white, and measure four inches in length, by two inches and three-quarters in breadth. Incubation lasts for six weeks, and is performed by both parents, in turns.

When the young are hatched, the old female will sometimes carry them on her back, when swimming about; and we believe this to be the practice of many of our aquatic birds.

In the adult male, the bill is orange red, the nail, base, lore, and tubercle, black. Irides, brown. The whole of the plumage is of a pure white. The legs and feet are black.

The female, which is somewhat smaller than the male, has the neck more slender, and swims more deeply in the water.

The young birds, before their first autumnal moult, are of a blue gray colour; the beak, lead-colour. After their second autumnal moult, they are almost white, and can hardly be distinguished from the old birds.

The Tame Swan weighs from twenty-five to thirty pounds.

In length it occasionally measures as much as five feet: but is generally from four to six inches shorter.

The trachea is simple, entering directly into the lungs, and does not traverse the breast-bone, as in the Swans already described.

POLISH SWAN, (*Cygnus immutabilis*.) Yarrell.

THIS Swan was confounded with the other Swans until the year 1836; and in 1838, a specimen was exhibited by Mr. Yarrell, at a meeting of the Zoological Society, and described under its present name. Mr. Yarrell states, that "during the severe weather of January 1838, several flocks of these Polish Swans were seen pursuing a southern course along the line of our north-east coast, from Scotland to the mouth of the Thames, and several specimens were obtained."

The Polish Swan is known to frequent the Baltic sea, from whence specimens find their way to this country. Its farther geographical range seems not to be known.

The Polish Swan has bred in Ireland, as mentioned by Mr Thompson; he says—"In August 1843, a bird preserver in Dublin, shewed me a Cygnet of a whitish gray colour, which puzzled him very much. He stated that it was the produce of a pair of Swans purchased by a gentleman, living in the neighbourhood of Dublin, a few years previously, in London, and whose Cygnets were always 'white,' instead of the ordinary gray colour."

This peculiarity, in the young birds being of the same colour as the adults, induced Mr. Yarrell to give it the name of 'immutabilis,' or, which does not change; certainly a very suitable name, and one which cannot be appropriated by any of our other Swans, whose young are all gray for the first two years.

"In the adult bird," according to Yarrell, "the beak is reddish orange; the nail, lateral margins, nostrils, and base of the upper mandible, black; the tubercle, even in the old male, of small size; the irides, brown; the head, neck, and the whole of the plumage, pure white; legs, toes, and intervening membranes, slate gray."

In length, it measures about four feet nine inches.

The trachea resembles that of the Mute Swan.



RUDY SHELDRAKE.

RUDDY SHIELDRAKE.

CASARKA SHIELDRAKE. COLLARED DUCK. RUDDY GOOSE.

<i>Tadorna rutila</i>,	.	.	.	.	PALLAS.
<i>Anas rutila</i>,	.	.	.	.	BEWICK.
<i>Canard Kasarka</i>,	.	.	.	.	TEMMINCK.

Tadorna. Quære, from *Adorno*—To adorn, on account of its beauty. *Rutila*—Fiery red.

WE know of but four specimens of this handsome bird, which have been obtained in these islands. One in the Newcastle Museum is believed to have been killed at Bryanstone, near Blandford, Dorset, in the winter of 1776. Another in Mr. Selby's collection, was obtained in the south of England; another was shot on the Sussex coast, at Iken, in 1834; and the fourth specimen was procured in Ireland, on the 7th. of July, 1847, on the Murrough, a flat sandy tract near the sea, in the county of Wicklow. This specimen is now in the collection of T. W. Warren, Esq., of Dublin; it is a male, nearly adult.

It has not been met with in Scotland.

Out of the British Isles it has been obtained in Austria, Denmark, Germany, Hungary, Italy, and the southern parts of Russia and Siberia. It also occurs in Asia Minor, Persia, India; and, it is said, in the whole of Africa.

It is said to be very indifferent eating.

It is monogamous.

The note is said by Mr. Yarrell, to be, "when flying, not unlike the note of a clarionet; at other times it cries like a Peacock, especially when kept confined; and now and then clucks like a hen."

The Ruddy Shieldrake feeds upon both animal and vegetable matter; water plants, their seeds; small fish, insects, and probably any other stray morsel which would tempt any of the other Ducks, which are by no means very choice in their articles of diet.

The nest of this bird is placed in a hole in a river bank, in the deserted burrows of the marmots; and sometimes in hollow trees, and is lined with its own feathers.

The eggs, which are eight or nine in number, are white.

Incubation is performed by both parents, each taking its turn in the arduous yet pleasing labour.

Hitherto they have resisted every attempt at domestication. They would, however, form a very ornamental addition to any extensive artificial piece of water; and would probably live and do well in suitable situations.

In the adult male, according to Selby, the "forehead, cheeks, and chin, are pale ochreous yellow; region of the eyes, crown of the head, and nape of the neck, greyish white; neck, as far as the collar, ochreous yellow, tinged with orange; collar, about half an inch in width, glossed with green; breast, mantle, scapulars, and under parts of the body, gall stone yellow, tinged with orange, being deepest upon the breast; the feathers upon the upper parts of the body have the margins paler, and the long tertials pass into sienna yellow; lesser and middle wing coverts, white; secondary quills, green, glossed with purple, and forming a large speculum; greater quills, black; lower part of the back, upper tail coverts, and tail, black, glossed with green; bill, legs, and feet, black." The bill is lead-colour; the irides are yellowish brown. The legs, toes, and their membranes are, according to Yarrell, of a "brownish gray."

The female resembles the male, but wants the black collar.

The male measures in length about two feet two inches. The female is rather smaller.



SHIELDRAKE

COMMON SHIELDRAKE.

BURROW DUCK. BAR GANDER. SKEELING GOOSE. SLY GOOSE, (in Orkney.)

<i>Tadorna vulpanser</i>,	.	.	.	.	.	LEACH.
<i>Tadorna Bellonii</i>,	.	.	.	.	.	JENYNS.
<i>Anas Tadorna</i>,	.	.	.	.	.	LINNÆUS.
<i>Canard Tadorne</i>,	.	.	.	.	.	TEMMINCK.

Tadorna. Quære, from *Adorno*—To adorn, on account of its beauty. *Vulpanser*. Quære, from *Vulpes*—A fox, from its cunning.

THE gaudy colouring of this handsome bird, causes it to be much sought after by collectors of stuffed birds; and it certainly makes a striking addition to the ornamental character of the collection.

The Shieldrake is found widely distributed over England, Ireland, and Scotland, wherever "there is an extent of flat common or warren, or undulating land free from cover, and where the shore in addition is low and sandy." It is however sometimes found in more elevated districts, of the same prevailing character.

Out of these countries, it is met with, in more or less abundance, in France, Germany, Holland, Italy, Norway, and Sweden; and is a winter visitor to the Islands of Corfu, Malta, and Sicily. It is reported also to be found in Nepaul and Japan.

The Shieldrake is very worthless as an article of food, and nothing but extreme hunger, or curiosity, would induce any one to dine upon it. To any one wishing to attempt such a thing, we recommend a reserve of beef-steak, or some such well-known "dietetic article."

The habits of this large and showy bird are almost wholly maritime, and it is a rare occurrence for any of them to be obtained away from the sea-side. They remain with us the whole year, and breed regularly in many places, such as we have above named as haunted by them, when undisturbed by their constant enemy—man. Many are however added to their numbers during the winter season, by migration from more northern latitudes. They are readily tamed, and if afforded suitable dry banks, with artificial holes made in them, they will, according to Yarrell, breed readily. In a wild

state they are said to feign lameness, like some of our land birds, if come upon suddenly, while they have a very young brood with them: when the young are older, they leave them to shift for themselves, and secure their own safety by flight.

The food of the Shieldrake consists of marine shell-fish, crustacea, sea-worms, and sea-slugs, together with portions of various sea-weeds. In a state of domestication, they eat almost anything that is given to them—corn, bread, potatoes, and other such things.

They are monogamus.

The note is a shrill whistle.

The nest is usually placed in a hole in the earth, frequently an old rabbit-hole; and the excavation is sometimes carried, as recorded by Mr. Selby, as far as ten or twelve feet. It is formed of dried grass or sedge, and lined with their own down.

The eggs, which are from ten to fourteen in number, are of a shining white; and measure two inches and three-quarters in length, by one inch and eleven lines in breadth.

Incubation is completed in thirty days; and, Mr. Selby says, the male watches near during the whole period, and at morning and evening takes his turn upon the eggs, thus allowing the female time to obtain the necessary food.

The young birds, as soon as hatched, are led, or sometimes even carried in the bill, to the sea, and soon learn to take care of themselves by scattering and diving to avoid danger.

In the adult male, the bill is scarlet colour; irides, brown. Head and upper neck, glossy blackish green; lower part of neck and upper breast, pure white; lower breast, chestnut red, the same colour running over the upper part of the back in a narrower band. The centre of the back, rump, and upper tail coverts, are white; tail, white, with the tip black. Primaries, black, as are also the scapulars; secondaries form a green speculum; tertials, white, the outer webs having a broad edge of chestnut red. Point of wing, and wing coverts, white. Centre of belly, black; which colour also runs through the chestnut band on the breast. Vent, and under tail coverts, white; as are also the sides and thighs. Legs and feet, flesh-colour.

The females are somewhat smaller, and less brightly coloured, than the males.

The young birds are less brightly coloured than the adults; and the colours are less distinct. The white is less pure, and the chestnut more inclined to dark brown.

The total length is from two feet to two feet two inches.



SHOVELER.

BLUE-WINGED SHOVELER. RED-BREASTED SHOVELER. COMMON SHOVELER. BROAD-BILL.

<i>Spathulea clypeata</i>,	.	.	.	.	.	FLEMING.
<i>Anas rubens</i>,	.	.	.	.	.	PENNANT.
<i>Rhynchaspis clypeata</i>,	.	.	.	.	.	STEPHENS.

Spathulea. *Spathula*—A broad knife used for spreading salve, on account of its shape.

Clypeata—That carries a shield.

THE Shoveler, although widely distributed, is by no means common in any part of the United Kingdom. The greater number probably migrate to this country in the winter, but a few are known to breed regularly in Norfolk. It occurs sparingly during the winter all along the eastern and southern counties of England: in North Wales and Cumberland, and occasionally in many other counties. In Scotland it is rare, and is not mentioned by Mr. St. John, as being found in Sutherland.

In Ireland it is a regular winter visitor, and is said to breed in some parts of the island.

Abroad its distribution is almost world-wide. Thus it occurs in France, Germany, Holland, Italy, Norway, Russia, Spain, and Sweden. In the islands of the Mediterranean; in both North and South Africa; in Asia Minor; about the shores of the Caspian sea; in India, and Japan. It also is found in North America. As a bird for the table, none of the ducks are to be preferred to the Shoveler; Wilson says that its flesh is uniformly juicy, tender, and well-tasted; and Audubon says that no one should pass a Shoveler to shoot even a Canvass-back duck, so well known to the transatlantic epicures; and now, thanks to steam, even to those of our own land.

In its habits, the Shoveler is a true duck; it frequents the muddy shores of rivers or fresh-water lakes, sifting the thin mud through its curiously formed bill in its search for water insects, their larvæ, minute worms, and seeds, of which the bulk of its food consists. It dives badly, and only attempts to do so when wounded and unable to escape a close pursuit in any other way.

It is monogamous.

The food of the Shoveler consists, as before stated, of all kinds of aquatic insects, their larvæ, minute worms, seeds, and small aquatic mollusca. Mr. Thompson mentions

having found in the stomachs of birds examined by him, vegetable matters of various kinds, seeds, sand, gravel, fragments of a *Littorina*; and in one a number of the shells of *Rissoa ulvæ*, and one full-grown *Littorina neritoides*, together with fragments of stone, as there were in all the others examined by him.

The nest is formed of dry grass; and is placed in the middle of some large tuft of rushes or coarse grass, growing on a dry spot in some secluded or inaccessible marsh.

The eggs, which are ten or twelve in number, are of a rusty yellow white, slightly tinged with greenish, and measure two inches and a sixth in length, by one inch and a half in breadth. It is said that the female after beginning to sit, covers the eggs with down pulled from her own body. When hatched, Mr. Yarrell states that the bills of the ducklings are narrow, and exhibit none of the peculiarity for which the old birds are noted. Hybrids between the Shoveler and the Gadwall have been obtained.

In the adult male, "the bill is brownish black, three inches in length, greatly widened near the extremity, closely pectinated on the sides, and furnished with a nail on the tip of each mandible; irides, bright orange; tongue, large and fleshy; the inside of the upper, and outside of the lower mandible, are grooved, so as to receive distinctly the long separated reed-like teeth; there is also a gibbosity in the two mandibles, which do not meet at the sides; and this vacuity is occupied by the sifters just mentioned; head and upper half of the neck, glossy changeable green; rest of the neck and breast, white, passing round and nearly meeting above; whole belly, dark reddish chestnut; flanks, brownish yellow, pencilled transversely with black, between which and the vent, which is black, is a band of white; back, blackish brown, exterior edges of the scapulars, white; lesser wing coverts, and some of the tertials, a fine light sky-blue; beauty spot on the wing, a changeable resplendent bronze green, bordered above by a band of white, and below with another of velvety black; rest of the wing, dusky, some of the tertials streaked down their middles with white; tail dusky, pointed, broadly edged with white; legs and feet, reddish orange; hind toe not finned."

"The female has the crown of a dusky brown; rest of the head and neck, yellowish white, thickly spotted with dark brown; these spots on the breast become larger and crescent-shaped; back and scapulars, dark brown, edged and centred with yellow ochre; belly slightly rufous, mixed with white; wing nearly as in the male."—Wilson.

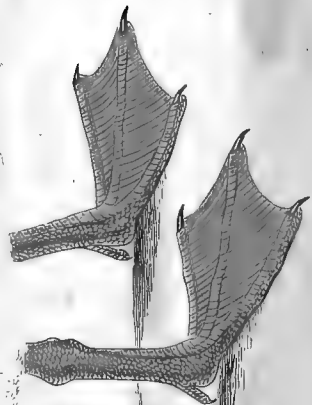
Young males have spots of brown on the breast, and white feathers here and there over the head and back.

"Adult males in summer change the green colour of the head and neck to brown, spotted with very dark brown; back and scapulars, dusky; breast and belly, ferruginous, spotted with black; legs, orange."—Yarrell.

The weight is about one pound two ounces.

In length it measures one foot eight inches.





GADWALL.

<i>Anas strepera</i>,	.	.	.	.	.	LINNÆUS.
<i>Chauliodus strepera</i>,	.	.	.	.	.	SWAINSON.
<i>Canard chipecau</i>,	.	.	.	.	.	TEMMINCK.

Anas—A Duck.

Strepera—Noisy, from *Strepto*—To make a noise.

THE Gadwall is a rare bird in this country, and we have but on one occasion seen specimens recently killed; in 1852, we examined a male and female, which had been purchased in the York market, by Mr. D. Graham, the talented taxidermist of that city; they are now in the possession of our brother, Frederick P. Morris, Esq., of Lincoln's Inn, London. Specimens have been obtained in the counties of Cambridge, Cornwall, Devon, Essex, Kent as recorded by the Rev. J. P. Bartlett, Norfolk, Oxford two or three times, Suffolk, and Yorkshire. In Scotland it has not been met with on the mainland, so far as we are aware, but it is now and then obtained in Sanday, one of the Orkney Islands.

In Ireland it is, according to Mr. Thompson, of rare occurrence.

Abroad, it is met with rarely in Sweden, very commonly in Holland, less frequently in France, Italy, and Switzerland. It is a winter visitor to the Islands of Sicily, Malta, and Corfu. It is met with in North Africa, the Caucasus, India, and North America.

The Gadwall is considered excellent for the table.

In its habits it is shy, hiding itself among thick reeds and rushes; it flies with great rapidity, and dives with much celerity, so much so that it is not easy to shoot it when sitting on the water. It feeds not only at morning and evening twilight, but also during the day.

Like the rest of the family it is monogamous.

Its note is said to be much like that of the Mallard, but more sonorous.

Its food consists, according to Yarrell, of vegetable matters, aquatic insects, and small fish.

The nest is formed of dry grass, and lined with down; in it are deposited seven or eight eggs, of a "uniform buffy white, tinged with green, and measure two inches two lines in length, by one inch eight lines in breadth."

They have bred, on several occasions, in the gardens of the London Zoological Society.

In the adult male, the bill, which is two inches long, and in shape much like that of the Common Duck, is of a brownish black. Irides, hazel. Head, and upper part of neck, light brown, speckled closely with dark brown. The middle portion of the neck of the same character, but with the ground colour rather more tawny. Lower neck and breast, black; each feather with one or more narrow crescentic lines of white. On the back the same colours prevail, but the white is arranged rather in transverse lines than crescents. Rump and upper tail coverts, black; tail pointed, the feathers brown, with brownish white edges. Primaries, brownish black; the first feather having a white shaft. Secondaries, the same colour, but the outer webs of two, white; which form the speculum; tertials, long and pointed, a light brownish gray; the centres of the feathers of a darker tinge. Greater wing coverts, rich black, with a slight reddish tinge; lesser coverts, a fine chestnut; the coverts forming with the speculum three bars of white, black, and chestnut. Lower part of breast and belly, a gray white. Feathers on sides, flanks, and vent, nearly black; with numerous narrow ziz-zag lines of white across them. Under tail coverts, black. Legs and feet, orange red; claws, black.

The female has the head and neck pale brown, closely spotted with dark brown; crown and nape, darker. On the neck and breast, the feathers are marked with two shades of brown; the crescentic form less distinct than in the male. The upper parts, brown; the feathers edged with very pale brown. Wings like the male, but the colours less bright and clear. Tail, as in the male. Belly, impure white; flanks and sides, very light brown, with broad bands and crescents of darker brown. Under tail coverts, a mixture of brown and brownish white.

In length it measures one foot eight inches.

The descriptions are taken from the birds above mentioned, as belonging to F. P. Morris, Esq.



PINTAIL DUCK.

PINTAIL DUCK.

PINTAIL. CRACKER. SPRIGTAIL. LADY DUCK. SEA-PHEASANT. .

<i>Anas acuta,</i>	.	.	.	.	.	.	LINNEUS.
<i>Querquedula acuta,</i>	.	.	.	.	.	.	SELBY.
<i>Dafila caudacuta,</i>	.	.	.	.	.	.	LEACH.
<i>Canard pilet,</i>	.	.	.	.	.	.	TEMMINCK.

Anas—A Duck.*Acuta*—Sharp or pointed, from the form of its tail.

WE have always considered the Pintail to be the most elegant of our ducks with which we were acquainted, and any one observing the graceful motions and delicate forms of those semi-domesticated in the ornamental waters of St. James' Park, London, will, we think, agree with us in our opinion. Its chaste colouring, too, harmonizes with its elegant and slender form.

It is a winter visitor to our shores, arriving frequently as early as September, and leaving us in the spring.

It is by no means uncommon along the south coast of England, except in Devon and Cornwall, where it is said to be rare; thus we find W. P. Cocks, Esq. recording in "The Naturalist," volume i., page 138, the occurrence of only two specimens at Falmouth. On the eastern coast it is frequently met with; but Yarrell states that it is seldom obtained in the extreme northern countries. It is however regularly procured, though only in limited numbers, in the York market, which is supplied from decoys in the county, and on the borders of the Humber, in Lincolnshire.

In Scotland it is not common. Sir William Jardine mentions having shot, in the south of Scotland, a pair in immature plumage, in the month of September, feeding at dusk in some wet stubble, in company with the Mallard and Common Teal. He also very justly remarks that we must not judge of the frequency of its occurrence in this country, by the numbers to be met with in the markets, which are now very frequently largely supplied from decoys in Holland and France. This observation holds good also with regard to several of our other Ducks and game birds.

The Reverend James Smith, in speaking of the River Dovert, in Banffshire, says—

"Once also, and only once, a single specimen was observed of the Pintail Duck, (*Anas acuta*;) it was in a flock of Mallards, and continued to associate with them for several days." Tracing it still farther north, we find Mr. C. St. John stating that it visits Sutherlandshire during the winter months. It does not appear however to be common in any part of Scotland. In Orkney, it is reported to be common, but it is more than probable that the Long-tailed Duck, (*Harelda glacialis*;) which is abundant in Scotland, has been mistaken for it.

In Ireland it is a regular winter visitor in small numbers, a few being procured in Belfast Bay and Lough Foyle as early as September in most years; and Mr. Thompson says that later, in October, few are met with but single birds, generally in company with Wigeon, and called by the shooters, Pintail Wigeon.

It is found commonly in the northern countries of Europe, becoming less abundant towards the southern parts, as Italy, Spain, and the Islands of the Mediterranean. It occurs in Asia Minor, India, China, and Japan. In North America, it seems to be a common species, and is frequently to be met with in the markets, being held in great esteem for the table.

As an article of food it is highly spoken of, and we believe deserves all that has been said in its favour.

The Pintail is shy and vigilant in its habits, and is very quick in taking and giving alarm: and thus frequently saves the lives, at any rate for a time, of many birds of a less vigilant disposition. It feeds during the day, as well as in the morning and evening, and according to Audubon, scarcely at all during the night. It seldom dives, unless wounded, when Wilson says, they will sometimes come up and "conceal themselves under the bow of the boat, moving round as it moves." They seldom frequent the sea-shore, but are mostly to be found in shallow inland waters, and marshy places where their food is most readily obtainable. When frightened, Wilson states that they "cluster confusedly together as they mount, and thereby afford the sportsman a fair opportunity of raking them with advantage," differing in this respect from many of our other Ducks, which disperse quickly on such occasions.

The great elegance which characterizes the Pintail, has given origin to several local names indicative of admiration of its beauty; thus the Dublin game dealers give it "the complimentary title of 'Lady-bird,'" or Lady-duck; while on the coasts of Dorsetshire and Hampshire, where it is met with in considerable abundance, though in small flocks, it is frequently called the Sea-Pheasant; no doubt the length of its tail has suggested the comparison with one of our handsomest game birds.

It is monogamous.

The note is said to be a soft and chattering one, and has been compared by Montagu to the feeble sound uttered by a very young kitten. Mr. Thompson says that their

ordinary call-note is a peculiar brief whistle, somewhat resembling that of the Teal, and that "the shooters state that the cry of the Pintail when wounded and pursued, is like that of the Mallard, or Duck, though more weak, and that they quack much at such times."

The food of the Pintail consists of various vegetable matters, seeds, beech mast, water insects, and small fresh-water mollusca; sand or gravel being also always found in the stomach.

The nest is placed amongst reeds and rushes.

The eggs, which are from five to seven in number, are of a greenish white colour, and measure "two inches one line in length, by one inch five lines in breadth."

Hybrids have been produced between the Pintail and the Wigeon; and between the Pintail and Mallard. This latter cross appears not to be very unfrequent, as we have seen several specimens apparently only to be referred to such an origin, the produce of Lord Wenlock's decoy at Escrick Park, near York. Two of these birds came into the possession of our friend W. D. T. Duesberry, Esq., of Skelton, near York; and not only paired, but actually produced a brood of young ones, which we saw swimming on one of Mr. Duesberry's ponds. An adult hybrid of this kind was also obtained at Moreby Hall, near York, the seat of H. Preston, Esq., on November 27th., 1849; in whose collection it now is. Sir William Jardine also records two instances of similar hybrids occurring; one of which came under his own observation.

The adult male in winter has the bill of "a dusky lead-colour; irides, dark hazel; head and half of the neck, pale brown; each side of the neck marked with a band of purple violet, bordering the white; hind part of the upper half of the neck, black; bordered on each side by a stripe of white, which spreads over the lower part of the neck before; sides of the breast, and upper part of the back, white, thickly and elegantly marked with transverse undulating lines of black, here and there tinged with pale buff; throat and middle of the belly, white, tinged with cream; flanks, finely pencilled with waving lines; vent, white; under tail coverts, black; lesser wing coverts, brown ash; greater, the same, tipped with orange; below which is the speculum, or beauty spot, of rich golden green, bordered below with a band of black, and another of white; primaries, dusky brown; tertials, long, black, edged with white, and tinged with rust; rump and tail coverts, pale ash, centred with dark brown; tail, greatly pointed, the two middle tapering feathers being full five inches longer than the others, and black; the rest brown ash, edged with white; legs, a pale lead-colour."

The female has the crown of a dark brown colour; neck, of a dull brownish white, thickly speckled with dark brown; breast and belly, pale brownish white, interspersed with white; back and root of the neck above, black, each feather elegantly waved with broad lines of brownish white; these wavings become rufous on the scapulars; vent, spotted

with dark brown; tail, dark brown, spotted with white; the two middle feathers half an inch longer than the others."—Wilson.

The male, in common with many of the other species of Ducks, during July, August, and September, assumes a good deal the colouring of the female. Montagu describes this state at length.

The male Pintail measures from twenty-six to twenty-eight inches in length; and two feet ten inches from tip to tip of wings.



BIMACULATED DUCK.

<i>Anas bimaculata</i>,	.	.	.	.	.	PENNANT.
<i>Anas glocitans</i>,	.	.	.	.	.	GMELIN.
<i>Querquedula glocitans</i>,	.	.	.	.	.	SELBY.
<i>Canarde glousseur</i>,	.	.	.	.	.	TEMMINCK.

Anas—A Duck.*Bimaculata*—Two-spotted.

As far as we can ascertain, but six specimens of this handsome Duck have been procured within the limits of these islands. Pennant mentions one as taken in a decoy, in 1771. A pair in Mr. Yarrell's collection, were taken in a decoy near Maldon, in Essex, in the winter of 1812-13. A fourth specimen, a male, was procured in the London market, in the winter of 1842-3, by Mr. Bartlett. A fifth, a female, was bought in the London market, by Mr. R. F. Tomes, of Weston, on the 9th. of December, 1846. The sixth and last specimen was seen in the flesh by Mr. E. Newman, in possession of Mr. Gardener, of Oxford Street, London, on December 1st., 1849. It was a male, and was taken in a decoy, but where is not mentioned.

It has been seen in Iceland, by Mr. Procter. Mr. Thompson states that it inhabits Northern Asia; and Mr. Yarrell says that there was a specimen "in the Chinese exhibition, indicating that it is a bird of that country." We, however, as yet, know very little as to its distribution.

As may be judged from the above meagre records, its habits are entirely unknown, and can only be conjectured to be probably somewhat similar to those of the Pintail; the general form of the bird being lengthy, and the tail somewhat acuminate, as in the Pintail.

Of its note we know nothing.

Of its food we are in equal ignorance; the only record as to the contents of the stomach being that by Mr. Tomes, who says, of his specimen, "The stomach was half filled with fine sand."

Its habits of nidification, and its eggs, are also involved in obscurity.

In the adult male the "bill is blackish grey, passing towards the base and edges into orange yellow. Front, crown, and occiput, very deep reddish brown, glossed with

purplish black, and passing upon the hind part of the neck into deep violet purple. Between the bill and eyes, and behind the ear coverts, are two large irregular patches of chestnut brown, margined and varied with white. Sides of the neck, and cheeks, glossy duck green; the rest of the upper part of the neck, and sides of the breast, reddish brown, with oval black spots. The middle part of the breast, pale reddish brown, also spotted with black. Ground colour of the mantle, pale sienna yellow, undulated with black lines. Scapulars the same, tipped with glossy Scotch blue. Wing coverts, hair brown, the lower range having pale wood brown tips. Speculum, dark green, glossed with purple. Tail, wedge-shaped, with the two middle feathers black, narrow, acuminate, and much longer than the rest, which are hair brown, margined with white. Belly and abdomen, yellowish white, with undulating black lines, most distinct upon the flanks. Legs and feet, pale orange."

The female has the "chin and throat pale buff. Head and neck, the same, but with spots and streaks of black, those upon the crown of the head being larger and more distinct. Lower part of the neck, and sides of the breast, pale yellowish brown, with blackish brown spots. Flanks, variegated with yellowish brown, and blackish brown; upper parts, blackish brown, the feathers being deeply margined with reddish white, and pale yellowish brown. Lesser wing coverts, hair brown, with the lower tier deeply tipped with pale reddish brown. The upper half of the speculum, green, with purple reflections; the lower half, velvet black, with white tips to the feathers. Quills and tail, hair brown, the latter margined with white, and reddish white. Legs, orange."—Selby.

It is stated, by Mr. W. R. Fisher, of Cambridge, that the bill and legs of Mr. Tomes' specimen, a female, were bluish gray.

The length is fifteen inches and three-quarters. Mr. Tomes' specimen measured seventeen inches and a quarter.



WILD DUCK.

MALLARD.

WILD DUCK.

<i>Anas boschas,</i>	.	.	.	.	.	LINNÆUS.
<i>Boschas fera,</i>	.	.	.	.	.	BRISSON.
<i>Canard sauvage,</i>	.	.	.	.	.	TEMMINCK.

Anas—A Duck. *Boschas*—Quære. *Bosko*—To lead to pasture, from the Drake
leading the Ducks to feed.

THE present species cannot be viewed without considerable interest, not so much on account of its intrinsic value, as that it has undoubtedly been the origin of the great bulk of our domestic Ducks; and notwithstanding the changes which have been induced by their subjugation to the rule of man, one can hardly inspect any farm-yard without remarking that many of the Ducks present unmistakeable evidence of a close affinity to their wild relation.

In former times the Mallard was much more numerous in Great Britain and Ireland, than since the modern improvements in farming, by which so many thousand acres, which used to be barren marsh or water, affording sustenance only to the *feræ naturæ*, have been rendered, by drainage, capable of producing luxuriant crops of corn, and other valuable commodities. Still there are few parts of the country where Wild Ducks may not now and then be seen; and in some they are yet abundant at certain seasons, and a few may be met with throughout the year; indeed a certain number breed with us regularly, in all suitable localities, such as extensive or secluded commons, where water is abundant; and occasionally along the banks of some of our quiet rivers and mountain streams. Every year, however, late in autumn, or early in winter, large numbers migrate to our shores from the northern parts of Europe, and added to those bred amongst us, afford excellent sport to those gunners who do not fear exposure to cold and wet: but of this, more anon.

The Mallard is met with in the whole of Europe, and the northern parts of Asia. It also occurs in America, throughout the whole of the United States in the winter, even as far south as Florida, where, according to Wilson, "The Mallard is numerous in

the rice fields of the Southern States during winter, many of the fields being covered with a few inches of water; and, the scattered grains of the former harvest lying in abundance, the ducks swim about and feed at pleasure."

We need hardly say that the Wild Duck is held in high estimation for the table; and vast numbers are annually sent to the London and provincial markets from decoys in different parts of the country.

Wary and vigilant in its habits, the Mallard is not easily approached; but when a flock is seen quietly rising from the water, it affords a very interesting sight to the naturalist; this has been well described by Mr. Watters, in his "Birds of Ireland;" he says, "Rising, when not alarmed, from the surface of the water in a 'long string,' regular in order, one never attempts to rise until the preceding bird is on the wing, when they form a beautiful appearance, either in the long extended line, or the V shape, which is frequently assumed. One flock of these birds observed flying over the Pigeon House Wall, (Dublin Bay) at a very moderate distance from the road, exhibited a very beautiful sight; each bird seemed, from its closeness to the one preceding it, as if its bill rested on the tail of the other. On our proximity being observed, the effect was singularly fine, the entire flock without the slightest break, shooting upwards, and the call-note of danger ringing out clearly from the first old Mallard, and passing in regular succession along the line."

During severe hard winters, large flocks of drakes may sometimes be observed, without the admixture of any ducks; this fact is mentioned by Mr. Thompson, as observed by him during severe frost in January, 1824. At other times birds of both sexes will be found associated together.

In its wild state the Mallard is monogamous; though, when domesticated, it is invariably polygamous.

The note is the well-known "quack, quack," as in our farm-yard bird.

The food is somewhat miscellaneous; grain, seeds, potatoes, insects, worms, frogs, slugs, and minute crustacea. Mr. Thompson has recorded the following matters, as taken from the stomach of a Mallard, killed at Larne Lough, in October, 1848.—"An eel, four inches in length; a crab, (*Carcinas mœnas*,) an inch broad across the carapace, or shell, and perfect; of marine univalve and bivalve shell-fish, one *Lacuna quadrifasciata*, two *Rissoa interrupta*, four *Rissoa albella*? five *Modiola discrepans*, (fry;) about twenty of the young of *Littorina vulgaris*, and *L. retusa*; forty *Montacuta*, (*Mya*,) *purpurea*; three hundred and ninety-one *Bulla obtusa*, and four hundred and seventy-five *Rissoa alba*; it contained also above four thousand five hundred of the handsomely-sculptured seeds of the grass-wrack, (*Zostera marina*;) nor was this all, as fully one-tenth of the matter, that which adhered to the coats of the stomach, was not taken into account." Pretty well for any stomach not aldermanic.

To obtain so valuable a bird as the Mallard, various contrivances have been adopted by sportsmen and others, in order to overcome the natural wariness by which it escapes their ordinary pursuit. The most wholesale, and perhaps certain way of procuring these birds, is undoubtedly by means of the decoy; the working of this, however, scarcely comes within the province of the sportsman, and we shall not therefore enter into a description of the methods of forming and working a decoy; but shall refer those of our readers who may be curious in such matters to "Observations on the Fauna of Norfolk, and more particularly of the district of the Broads," by the Reverend Richard Lubbock, published in 1845.

Many of the various methods used by sportsmen for approaching flocks of Wild Ducks, have been enumerated by Alexander Wilson, from whose interesting account of these birds we extract the following:—"In some ponds frequented by these birds, five or six wooden figures, cut and painted so as to represent Ducks, and sunk, by pieces of lead nailed to their bottoms, so as to float at the usual depth on the surface, are anchored in a favourable position for being raked from a concealment of brush, etc., on shore. The appearance of these usually attracts passing flocks, which alight and are shot down. Sometimes eight or ten of these painted wooden Ducks are fixed on a frame in various swimming postures, and secured to the bow of the gunner's skiff, projecting before it in such a manner that the weight of the frame sinks the figures to their proper depth; the skiff is then dressed with sedge or coarse grass in an artful manner, as low as the water's edge; and under cover of this, which appears like a party of Ducks swimming by a small island, the gunner floats down, sometimes to the very skirts of a whole congregated multitude, and pours in a destructive and repeated fire of shot among them."

"In winter, when detached pieces of ice are occasionally floating in the river, some of the gunners on the Delaware paint their whole skiff or canoe white, and laying themselves flat at the bottom, with their hand over the side, silently managing a small paddle, direct it imperceptibly into or near a flock, before the Ducks have distinguished it from a floating mass of ice, and generally do great execution among them. A whole flock has sometimes been thus surprised asleep, with their heads under their wings."

"On land, another stratagem is sometimes practised with great success. A large tight hogshead is sunk in the flat marsh or mud, near the place where Ducks are accustomed to feed at low water, and where otherwise there is no shelter; the edges and tops are artfully concealed with tufts of long coarse grass, and reeds or sedge. From within this, the gunner, unseen and unsuspected, watches his collecting prey, and, when a sufficient number offers, sweeps them down with great effect."

"They are also taken with snares made of horse-hair, or with hooks baited with small

pieces of sheep's lights, which, floating on the surface, are swallowed by the Ducks, and with them the hooks. They are also approached under cover of a stalking horse, or a figure formed of thin boards, or other proper materials, and painted so as to represent a horse or ox."

Mr. C. St. John, from whose admirable writings we have on several occasions quoted, has thus described his method of shooting Mallards in Sutherlandshire:—"Just before sunset I take up my position in the midst of two or three furze bushes, within easy shot of where a small stream runs into one of the lakes, keeping the water constantly open. Having given my retriever a biscuit, which I always carry for him on these cold days, I light my pipe, (the great comfort of the patient Wildfowl shooter,) and look out towards the bay for the Mallards. The bay is nearly half a mile off, but I can see the Ducks between me and the sky, almost as soon as they leave it. At first a solitary pair or two come, quietly and swiftly, probably making their way to some favourite spring farther inland. However, with the help of a cartridge, I bring down a brace from a great height, as they pass over; sometimes tumbling on the ice of the loch behind me, they are nearly split in two; sometimes, when winged, they fall in the rushy stream, and give the retriever no small trouble and cold before he gets them; however, he always succeeds, and having brought the bird, and received his reward of ship-biscuit, he lies down again, but with eyes and ears all intent on what is going on. The Sea-Gull, or Heron, may pass, and he takes no notice of them; but the moment that a Wild Duck's quack, or the whistle of his wings is heard, the dog's ears erect themselves, and he watches my face with a look of most inquiring eagerness. I hear the Wild Swan 'trumpeting' on the sea, but know that they are not very likely to come where I am placed. Presently, however, a brace of Teal pitch suddenly and unexpectedly within a few yards of me, having flitted in from behind. I kill the drake, but cannot get a shot at the duck, as she flies low, and the smoke hanging heavily in the calm evening, prevents my seeing her. However, all at once the Mallards begin to fly from the sea; for half an hour or less I have to load and fire as fast as I can, as they fly over.

I prefer shooting them on the wing, for if I let them pitch in the water, my dog has to swim every time I kill one, and gets half-dead with ice and frozen snow. The Mallards generally fly in from the sea rapidly, and at no great height; but it requires some practice to kill them, as their flight is much quicker than it appears, and they require a hard blow to kill them dead. If wounded only they fly off, and dropping at some distance, I can seldom get them that night, owing to the approaching darkness. Sometimes my retriever marks the direction of a wounded Duck, and gets it; but generally they are lost, and serve only to feed the foxes, who seem to hunt for maimed birds regularly round the lakes."

"I shot at a Mallard a considerable distance from me, and evidently struck him, as after flying some distance to the windward, he pitched in a grass field; but on my approach, he rose again and went at a great height down wind towards the sea. I happened to keep my glass on him, and when he was about a quarter of a mile off, I saw him turn over in the air and fall. On coming up to the place I found the bird quite alive, but with his wing broken close to the body. The shot must have struck the bone without breaking it. The singular part of the affair was, that the bird could battle against strong wind, for at least a quarter of a mile, without the injured bone giving way."

It is the opinion of Mr. Waterton, who has written well, and from personal observation, upon the Mallard, that these birds when paired, remain so during the whole year, and that the young birds which are hatched in this country, pair long before they migrate to the north in the following spring. This opinion is also confirmed by Mr. W. Thompson, in Ireland; and by Wilson and Audubon, in America.

The nest is composed of dry grass, small sticks, or such like, and lined with down; it is variously placed; sometimes amongst sedge near the shore of some secluded inland water; at others amongst furze brakes, corn-fields, and thick hedge-rows. Less frequently it is found in trees at a considerable elevation from the ground. Thus Mr. Selby records, that a "Wild Duck laid her eggs in the old nest of a crow, at least, thirty feet from the ground." Yarrell mentions one at twenty-five feet from the ground, in an oak tree. Mr. Thompson mentions a magpie's nest, in a silver fir, in Hillsborough Park, about eighty feet from the ground, and a furlong at least from any water, which was taken possession of by a Wild Duck; the young birds were safely carried off by the parent bird. This occurred in 1848. Of the eccentric nesting of the Mallard, Mr. St. John remarks:—

"The common Wild Duck often builds her nest in a situation from which one would suppose it would be very difficult for the young, when first hatched, to make their way to the water. My retriever put up a Wild Duck, on the 16th., (April,) in some very high and close heather, at some distance from any water. I found that she had her nest in the very centre of the heather, and in the densest part of it. The nest was very beautifully formed, and looked like a mass of the finest down, with just sufficient coating of small sticks, etc. outside, to keep the down together."

The eggs are from twelve to sixteen in number, and are of a dull greenish white colour, measuring two inches and a half in length, by one inch and seven lines in breadth. When the duck leaves the nest, she covers the eggs with moss, or some similar substance, to conceal them from view: as stated by Mr. Thompson.

Incubation is performed by the duck alone, upon whom also devolves the entire care of bringing up the young brood. In doing this she will use various stratagems to lure

an intruder from her brood, feigning lameness or other injury, until they are out of danger. The young birds are frequently the prey of pike, when swimming or sporting in the waters frequented by them. The eggs of the Wild Duck are readily hatched under the domestic hen, and ordinarily, the young birds never become entirely reconciled to the loss of their natural liberty; in others they become very tame, and readily associate with their domestic relations, shewing but little of their wild origin, beyond occasional flights to some little distance.

The female sometimes assumes the plumage of the male, but the colours are not so bright or distinct.

Hybrids have been met with between this bird and the Egyptian Goose, the Pintail, Shieldrake, and the Muscovy Duck. The produce of this last union is of a very large size, and is much admired for the table. We have seen it in the hands of Mr. Graham, of York; and in some parts of the North Riding of Yorkshire it is by no means uncommon, as we are informed by the Reverend Robert Pulleine, of Kirkby Wiske.

In the adult male, the bill is greenish yellow; irides, hazel. Head and upper half of neck, of a deep changeable glossy green; at the bottom of this is a narrow white collar; lower neck and breast, dark rich chestnut; back, brown; rump and upper tail coverts, darker—nearly black. Tail of eighteen feathers; the four middle ones, deep black, and curled upwards; the other feathers are of an ashy brown, with white edges. Lesser wing coverts, brownish ash; the greater coverts tipped with deep velvety black, inside which is a white bar. Primaries, brownish ash; the speculum, of a rich light purple, reflecting green and violet, and bounded with a black bar tipped with white. Tertials, light reddish brown, very broad, and with pointed ends. Belly and sides, gray, marked transversely by numerous narrow waving darker lines. Under tail coverts, black. Legs and feet, orange colour.

The female has the bill of a blacker tinge; the upper parts of a dark brown, the feathers with a broad edge of light brown. Chin and throat, pale brown; lower parts of a pale yellowish brown, streaked and spotted with dark brown. Legs and feet as in the male.

The Mallard weighs about two pounds and a half, and measures two feet in length.

The female weighs less, and measures also two inches less in length.



GARGANEY TEAL.

SUMMER TEAL. GARGANEY. GARGANEY DUCK. AFRICAN TEAL.

<i>Anas querquedula,</i>	.	.	.	.	.	.	JENNÆUS.
<i>Querquedula circia,</i>	.	.	.	.	.	.	STEPHENS.
<i>Sarcelle d'été,</i>	.	.	.	.	.	.	TEMMINCK.

Anas—A Duck. *Querquedula*—A water-fowl called a Teal.

THE Garganey is one of our most elegant and chastely coloured Ducks, and from its usually appearing in this country only during the spring and summer months, and occasionally breeding with us, it has obtained the name of Summer Teal. Mr. Yarrell states that he has seen specimens as late as October, and Mr. Knox says that immature birds are not unfrequently met with in winter, on the coast of Sussex, but that adults, especially males, are rare.

It has been obtained in Cornwall, but rarely; two occurrences are noted by W. P. Cocks, Esq., in "The Naturalist," vol. i., p. 138. In Devon also rarely. In Essex; in Hertfordshire, near Tring, where several specimens were procured by J. Williams, Esq., of Tring Park, at the end of March, in 1849. It has also occurred in Kent, Lincolnshire, and Norfolk, where it sometimes breeds; as well as in Suffolk and Sussex, as stated above. Of its occurrence in our more northern counties we have no record.

In Scotland six specimens were shot in Stirlingshire, in March, 1841, some of which came into the hands of Edward Clarke, M.D. It is also said to visit the Orkney Islands.

In Ireland it is very rare, but has been procured in the counties of Cork, Down, one having been seen on Strangford Lough; King's County, and Westmeath.

It inhabits France, Germany, Holland, Italy, Russia, Spain, Sweden, and Siberia; and is met with in the Islands of the Mediterranean, and across the Continent of Asia to India. It has also been procured from Tunis, in Africa.

The winter quarters of the Garganey appear to be still unknown. It seems to migrate northward in the spring, for the purpose of incubation, returning south for the winter as autumn approaches.

As a bird for the table, the Garganey is most highly spoken of by those who have tried it, being remarkable for the delicacy and flavour of its flesh.

Of its habits, as distinct from the other Ducks, we have no records; but we may suppose them to be similar to those of the Teal, to which it is closely allied. The specimen seen on Strangford Lough, is stated to have allowed "a very close approach, and seemed to have no apprehension of danger."

The note, as observed by Mr. Selby, is "a low hoarse croak."

Its food consists of various seeds, and portions of vegetable matter, snails, slugs, worms, and insects.

The nest is commonly placed among reeds and rushes, and is composed of dried grasses.

The eggs, which are of a buff colour, are twelve or fourteen in number, and measure one inch and three-quarters in length, by one inch and one-quarter in breadth.

The Garganey is stated by Yarrell to have bred with the Shoveler.

The adult male has the bill brown; irides, hazel; from the bill, running over the crown of the head, is a band of dark brown, which narrows on the occiput, and ends in a point on the back of the neck, half way down; over each eye and ear covert is a band of white, running under the dark brown, and narrowing towards the back of the neck. Cheeks and neck, light reddish brown, each feather having a central line of white. Feathers on the back, blackish brown, edged with lighter brown. The scapulars are long and pointed, black, with a central line of white; wing coverts, bluish gray. Primaries, brownish black; speculum, dull green, edged with white; tertials, bluish gray. Tail, brownish gray. Breast, yellowish brown, each feather with crescentic marks of dark brown; belly, white; vent, and under tail coverts, yellowish white, mottled with black. Sides and flanks, white, with irregular transverse bars of black. Legs and feet, grayish brown.

Females have the head brown, with dark spots, and a lighter band over the eye. Back, brown, with lighter edges; wing coverts, brown; speculum, as in male. Chin, white; breast, grayish white, with dark brown markings. Sides and flanks, of two shades of brown.

The length of the male is about sixteen inches.

The female is rather less.



SUMMER DUCK.

SUMMER DUCK.

WOOD DUCK. TREE DUCK.

Anas sponsa, LINNÆUS.*Anas*—A Duck. . . *Sponsa*—A bride.

THIS handsome bird has occasionally been obtained, apparently in an entirely wild state, in various parts of England. Some of these have probably been birds which had escaped from confinement; but, as in the case of some other birds, we see no reason why stragglers may not now and then be driven to our shores, out of their ordinary migratory course. Two male birds of this species were shot, apparently in a wild state, near Deal, in Kent, in 1848—one on November the 6th., in the meadow at Walmer Castle; the other two days later, in a dyke at Marsh side, Chislet. One of them came into the possession of J. W. Hulke, Esq., of Deal, who recorded the occurrence in the "Zoologist," for 1849. He states that his bird was in beautiful plumage, and was shot within two hundred yards of the sea. Early in the same year, (1848,) a Summer Duck was shot at Tenbury, in Worcestershire, as recorded, also in the "Zoologist," by Martin Curtler, Esq., of Bevere House, Worcester. We therefore give the Summer Duck a place in our list, and we hope that our plate and description may lead to the recognition of other specimens which have hitherto escaped notice.

The Summer Duck is a native of North America, being found throughout the whole of the United States, and southward as far as some of the West India Islands. It resides the whole year in the Southern States, but is only procured in the Northern during the summer months.

As an article of food it is good, but, Wilson says, not equal to the Blue-winged Teal, which is greatly esteemed.

The skin of the head and neck is frequently used by the North American Indians, to ornament the Pipe of Peace, or Calumet; it is commonly stretched over the stem. Its use for this purpose is doubtless on account of its beauty.

The Summer Duck rarely visits the sea-shore, preferring the quiet inland marshes

and ponds. It is somewhat solitary in its habits, usually flying singly or in pairs, and seldom exceeding three or four in one flock.

It is monogamous.

The ordinary note of the male is, according to Wilson, 'peet, peet;' "but when, standing sentinel, he sees danger, he makes a noise not unlike the crowing of a young cock, 'oe-eek! oe-eek!'"

The food consists of "acorns, seeds of the wild oats, and insects."

The nest is usually placed in the hollow of a tree; frequently of one hanging over water; and consists of dried grasses, feathers, and a lining of down. Rarely, however, the nest is formed of a few sticks, placed in some fork of a tree. This is, however, an exception to its ordinary habit.

In the Northern States the female commences laying in June, while in the more Southern she begins as early as March or April. In the middle states, incubation is said to take place at a period intermediate between these extremes.

The eggs, about thirteen in number, are of an exact oval, highly polished on the surface, and of a light yellowish colour. They measure two inches and one-eighth in length, by one inch and a half in breadth.

The following interesting account of its habits on the nest we quote from Wilson:—"On the 18th. of May, I visited a tree containing the nest of a Summer Duck, on the banks of Tuckahoe River, New Jersey. It was an old grotesque white oak, whose top had been torn off by a storm. It stood on the declivity of the bank, about twenty yards from the water. In this hollow and broken top, and about six feet down, on the soft decayed wood, lay thirteen eggs, snugly covered with down doubtless taken from the breast of the bird. This tree had been occupied, probably by the same pair, for four successive years in breeding time; the person who gave me the information, and whose house was within twenty or thirty yards of the tree, said that he had seen the female, the spring preceding, carry down thirteen young, one at a time, in less than ten minutes. She caught them in her bill by the wing or back of the neck, and landed them safely at the foot of the tree, whence she afterwards led them to the water. Under this same tree, at the time I visited it, a large sloop lay on the stocks, nearly finished; the deck was not more than twelve feet distant from the nest, yet, notwithstanding the presence and noise of the workmen, the Ducks would not abandon their old breeding-place, but continued to pass out and in as if no person had been near. The male usually perched on an adjoining limb, and kept watch while the female was laying, and also often while she was sitting. A tame Goose had chosen a hollow space at the root of the same tree, to lay and hatch her young in."

As to the mode in which the young birds convey themselves, or are conveyed to the water, it is stated, that should the tree in which the nest is placed, lean over water,

the ducklings will spread their tiny pinions, and boldly throw themselves into the water, their wings sufficiently breaking the force of their descent; in other cases they are carried by their parent, as before described, one by one to the ground, and then to the water.

The Summer Duck is readily induced to submit to confinement, and is kept, by many in this country, for ornamental purposes. In America, where it is so common, their taming has been carried to a great extent; thus, Wilson says—"This beautiful bird has been often tamed, and soon becomes so familiar as to permit one to stroke its back with the hand. I have seen individuals so tamed in various parts of the Union. Captain Boyer, collector of the port of Havre-de-Grace, informs me that about forty years ago, a Mr. Nathan Nichols, who lived on the west side of Gunpowder Creek, had a whole yard swarming with Summer Ducks, which he had tamed and completely domesticated, so that they bred and were as familiar as any other tame fowls; that he, (Captain Boyer,) himself saw them in that state, but does not know what became of them."

No duck is more ornamental on artificial water than the Summer Duck; and although semi-domesticated in many parts of England, we are surprised that it is not more commonly introduced; more particularly as it breeds readily in proper localities, as is evidenced by its having done so freely in the Zoological Gardens in London.

The adult male has the "bill red, margined with black; a spot of black lies between the nostrils, reaching nearly to the tip, which is also of the same colour, and furnished with a large hooked nail; irides, orange red; front, crown, and pendent crest, rich glossy bronze green, ending in violet, elegantly marked with a line of pure white, running from the upper mandible over the eye, and with another band of white proceeding from behind the eye, both mingling their long pendent plumes with the green and violet ones, producing a rich effect. Cheeks and sides of the upper neck, violet; chin, throat, and collar round the neck, pure white, curving up in the form of a crescent nearly to the posterior part of the eye; the white collar is bounded below with black. Breast, dark violet brown, marked on the fore part with minute triangular spots of white, increasing in size until they spread into the white of the belly; each side of the breast is bounded by a large crescent of white, and that again by a broader one of deep black; sides, under the wings, thickly and beautifully marked with fine undulating parallel lines of black, on a ground of yellowish drab; the flanks are ornamented with broad semicircular bands of black and white. Sides of the vent, rich light violet; tail coverts, long, of a hair-like texture at the sides, over which they descend, and of a deep black, glossed with green; back, dusky bronze, reflecting green. Scapulars, black; tail, tapering, dark glossy green above; below, dusky; primaries, dusky, silvery hoary without, tipped with violet blue; secondaries, greenish blue, tipped with white; wing coverts, violet blue, tipped with black; vent, dusky; legs and feet, yellowish red; claws, strong and hooked."

"The female has the head slightly crested; crown, dark purple; behind the eye, a bar of white; chin and throat, for two inches, also white; head and neck, dark drab; breast, dusky brown, marked with large triangular spots of white; back, dark glossy bronze brown, with some gold and greenish reflections. Speculum of the wing, nearly the same as in the male, but the fine penciling of the sides, and the long hair-like tail coverts are wanting; the tail is also shorter."—Wilson.

The male measures nineteen inches in length.



TEAL.

COMMON TEAL.

<i>Anas crecca</i>,	.	.	.	.	.	LINNEÆUS.
<i>Querquedula crecca</i>,	.	.	.	.	.	STEPHENS.
<i>Canard Sarcelle d'Hiver</i>,	.	.	.	.	.	TEMMINCK.

Anas—A Duck.

Crecca—From *Kreko*—To make a harsh, creaking noise.

WHO that has wandered during the autumnal and winter months, along the banks of almost any of our quiet little country streams, particularly if moderately wooded, has not been gratified by seeing the hasty flight of this, our smallest, Duck. It flies, however, but a short distance, and again plashes down suddenly into some quiet little pool, again to be disturbed by the approaching footstep. The Teal is very generally distributed over the whole country, preferring inland lakes and rivers, to the vicinity of the sea-shore, though in some suitable localities they are to be met with in large flocks on the salt water. Thus, Mr. Thompson says, that small flocks of forty or fifty usually appear in Belfast Bay, from August to November, when they retire inland; and if the frost is so severe as to freeze over the inland waters, they again appear in the Bay in January and February, often in flocks of four or five hundred. Of late years, however, they have greatly diminished in numbers. Large flocks of Teal migrate to this country in autumn, and depart in the spring to more northern latitudes. Many, however, remain to breed with us in secluded lakes and marshy places, in various parts of the country, from the extreme north of Scotland to the south coast of England. Sir W. Jardine is of opinion that in Scotland no foreign bred Teal join the native ones in the winter; he says, "In these parts of our islands, no general migration takes place; the bird is a constant resident, breeds in the vicinity of its haunts, and partially leaves them only in very dry or severe weather; and we do not think that there is any accession of numbers at any season from more distant localities."

They are abundant over the whole of Europe and Asia, but the American Teal, long thought to be identical, is now considered to be a distinct species.

The Teal is greatly esteemed as an article of food, and always finds a ready sale in the markets.

When not much disturbed, the Teal is perhaps the least shy and wild of any of our Ducks. The young birds dive with great ease and quickness, but we have never seen the old birds do so. At morning and evening twilight the Teal may be found feeding in stubble fields, ditches, and marshy places. When a flock of Teal is disturbed they fly in graceful circles, like the Plovers. Mr. Thompson says, "Its sight is amazingly acute; on very quietly advancing to the banks of this lake, at a great distance from a large flock, they would, when first seen, be reposing on the water in silence; but the next moment, having perceived me, would commence calling in a manner grating to the ear, and nearly resembling the sound produced by the solid wooden wheel of an old-fashioned Irish car wanting grease. They would then lightly spring into the air, wheel through it with amazing rapidity within a few seconds of time, appearing backed by the transparent medium of the water of the farther part of the lake, by the 'evergreen pine,' or mass of towering silver firs; by the soft, golden, floating clouds, or sweeping before extensive ranges or broken groups of deciduous trees; their colour appearing different every moment, as they were 'relieved' by these different objects; the greatest contrast being when they seemed all dark in hue, with the upper surface of their bodies turned towards me; or shone like silver when the white under plumage was exposed. So rapid are their movements, that it requires an effort—almost a straining—of the eye to follow them. Being intent on alighting, they will now from on high repeatedly sweep down towards the water, into which some individuals from the flock descend at every circuit, until the whole are gradually reposing on a more distant part of the lake, where their call, occasionally unheard during their more distant flight, is again distinctly given forth."

When a Teal is flushed on a stream, it usually flies farther up or down, as the case may be, and then suddenly drops into the water; and very frequently it will immediately begin to swim towards you, so that unless you are very careful, you will either pass it, supposing it to be where it pitched, or it will escape by flying from a point where you do not expect to see it.

The call-note is a kind of harsh whistle, as before stated; but they also will quack like a Duck, but not so loud. This has been noticed occasionally when the birds are wounded.

The food consists chiefly of vegetable matters, such as grasses, the seeds of various water-plants, and a small proportion of insects. Sand and gravel is also always found in the stomach.

The nest of the Teal is usually placed among reeds or coarse herbage near the edges of lakes or marshes; but sometimes it will be found at a distance from water,

among furze or heather. It is formed of a considerable quantity of herbage, and is lined with down and feathers.

The eggs are from eight to fourteen in number, and are one inch and three-quarters in length, by one inch and a third in breadth. They are of a buffy white colour.

In illustration of the fact that the nest is often placed at a distance from water, we extract the following from Mr. C. St. John's tour in Sutherland:—"As we were out driving the other day, a Teal came fluttering out of the dry ditch by the road side, and for above a hundred yards continued flying and running under the horse's feet. I found that she had a number of young ones unable to get over the wall, so we helped them into the adjoining wood. They were a long distance from the water, and had very rough ground to pass over to reach it. I remember exactly a similar circumstance happening to me in Ross-shire, when I also saved the lives of a young brood of Teal by lending them a helping hand. These instances prove that, notwithstanding the instinct of birds, which generally enables them to keep their young out of harm's way, they occasionally get them into a situation, not only of difficulty, but where any dog or mischievous boy coming along might destroy the whole brood."

The adult male has the "beak nearly black; the irides, hazel; forehead, and a narrow band over the top of the head, rich chestnut brown; at the gape and upwards, along the base of the upper mandible, and from thence high up over the eye, and then backwards towards the occiput, there is a narrow line of buff; from the lower edge of the eye to a point below and behind the ear coverts, another narrow line of the same light colour; all the space from the eye between these two lines, and extending backward to the occiput, forms a broad patch of rich glossy green. Cheeks and sides of the neck, below the under light-coloured line, rich chestnut; back of the neck, scapulars, and upper part of the back, a mixture of black and white, in narrow transverse lines; the longest of the scapulars and the tertials, dark brown; all the smaller wing coverts, ash brown; the large coverts tipped with white, forming a bar, two or three of the higher coverts having their white tinged with bay; primaries, dark brown; the secondaries forming a speculum of velvet black, green, and purple, tipped with white; lower part of the back, dark brown; upper tail coverts, almost black, edged with rufous; tail feathers, pointed, dark brown. The chin, black; front of the upper part of the neck, chestnut; lower part of the neck in front, partly covered with circular spots of black, on a ground of white tinged with pale purple; breast and belly, white; sides and flanks, barred with narrow black and white lines; central under tail coverts, velvet black; lateral tail coverts, delicate buff-colour, with a narrow band of velvet black at the base; under surface of tail feathers, ash gray; legs, toes, and membranes, brownish gray."

The female has the whole of the head speckled with dark brown, on a ground colour of light brown; upper part of back and scapulars, dark brown, each feather with two

narrow transverse bars of buffy brown; wing, like the male, but the speculum has more velvet black, less green, and no purple colour. Chin, pale brown; lower part of neck on the front and sides, varied with two shades of brown, in crescentic marks; breast, white; sides, flanks, and under tail coverts, dull white, spotted with dark brown."—Yarrell.

The males, during the summer, assume the dress of the females, which they retain till the autumn moult.

The weight of the male is about twelve ounces.

In length it measures a little over fourteen inches.



WIGEON.

WIDGEON. WHEW. WHISTLER. GOLDEN-HEADED WIGEON.

<i>Anas penelope,</i>	.	.	.	.	LINNÆUS.
<i>Mareca fistularis,</i>	.	.	.	.	STEPHENS.
<i>Canard siffleur,</i>	.	.	.	.	TEMMINCK.

Anas—A Duck. *Penelope*—A Wigeon, (PLINY.)

INNUMERABLE Wigeon come to this country during the season of frost and snow, and large numbers of them meet with but a sorry reception; their advent being the signal for a general crusade against them, with guns of all descriptions, from the light shoulder gun to the large swivel gun, which will carry a pound of large shot or slugs for one hundred and fifty yards. They make their appearance in this country, a few, as early as the end of August; but the great mass does not arrive until the end of September, or early in October. They continue with us during the winter, and take their departure in March and April. Some, however, remain to breed in the extreme north of Scotland—in Sutherlandshire, among the numerous lakes of which county they find suitable nesting-places.

Wigeon are met with in greater or less abundance over the whole of England, Wales, Scotland, and Ireland, during the winter.

It is found, we believe, in all the countries on the continent of Europe and Asia, breeding in the northern ones, as Norway and Sweden.

Few of our Ducks are in greater request for the table than the Wigeon; and their value in this respect is so well known, that the dealers will try to pass off other species as Wigeon. We remember an attempt of this kind being made upon us by a Dublin dealer, who vainly endeavoured to convince us that one of the *Fuligulinæ*, we forget which species, was a "regular Wigeon."

The Wigeon is readily captured in decoys, and large numbers are thus supplied to the markets. It is a wary bird, and by no means easy to be approached in an entirely wild state; though where it is protected from its artificial enemies in the shape of guns, "et hoc genus omne," as by Charles Waterton, Esq., at Walton Hall, it seems to throw

off its natural timidity to a great extent, and becomes, as he states, much more familiar than either the Teal or Pochard, coming close to the house without fear. Its food is taken at Walton Hall in the day-time; but in other less-favoured districts it feeds both by night and by day. When wounded by boat-shooters, Mr. Thompson states, that they retreat in all directions, seeking the sea-banks, or sometimes the land, where they conceal themselves in drains or cover of any kind. They dive very adroitly, and can sink the body in the water, so as to leave only the tip of the bill visible.

The note is a shrill whistle, hence its name of Whew.

The food consists chiefly of short grass, and *Zostera marina*; but Mr. Thompson has mentioned having once met with a sea-weed named *Enteromorpha clathrata*. Other plants are also occasionally eaten by them.

As to their method of procuring food during the time when the ground is covered by snow, Mr. C. St. John says, under date, "February 8th.—The Wigeons leave the bay, which is nearly covered with ice, and feed on the clover fields, digging under the snow with their bills, to get at the herbage. I never saw them do so before in this county; indeed it is very seldom that the snow in Morayshire remains long enough on the ground, at least in the district near the sea, to annoy the wildfowl to any extent."

It is also stated by Mr. St. John, that so early as February 8th., he has known Wigeon paired in Sutherlandshire.

The nest is composed of reeds, rushes, and other water-plants, lined with down; it is usually placed in a thick clump of rushes or coarse herbage, near the edge of some secluded lake or pond.

The eggs, which are of a creamy white colour, measure in length two inches and an eighth, by one inch and a half in breadth. In number they vary from five to eight.

The adult male has the bill bluish gray; the tip and nail, black. Irides, dark brown. Forehead and top of head, pale reddish yellow; cheeks and back of neck, chestnut; chin and throat, black. Back, scapulars, and sides, grayish white, irregularly waved with fine zig-zag lines of black. Upper tail coverts, speckled with gray; tail, brownish black, the feathers pointed and elongated. Primaries, hair brown; secondaries, black at the base and tip; the centre a fine green, forming the speculum or beauty spot; tertials have the inner webs gray, the outer ones black with an edging of white. Wing coverts, white; the greater with black tips. Lower neck and breast, pale reddish gray; belly and vent, white; under tail coverts, pure black; legs and feet, dark brown.

The female has the head and neck brownish yellow, covered with dark brown spots; feathers of back, brown with paler edges; breast, belly, and vent, white.

In the summer the males approximate in plumage to the females, and do not regain their beauty till after the autumnal moult. The young males resemble the females.

In length the adult male measures eighteen inches.



AMERICAN WIGEON.

AMERICAN WIGEON.

Anas Americana, WILSON.
Mareca Americana, STEPHENS.

Anas—A Duck. *Americana*—American.

THE first notice of the occurrence of this Duck in England, was contained in the "Naturalist," (old series,) volume iii. It is there stated by Mr. E. Blyth, that Mr. Bartlett had procured a male in the London market, in the winter of 1837-38. It was among a lot of the Common Wigeon, and he picked it out, thinking it a variety of the common species; there was a female among the same lot, which, however, he unfortunately did not secure, looking upon it merely as a slight variety. Mr. Thompson satisfied himself that a male specimen had been shot on Strangford Lough, by a wildfowl shooter. He thus records the fact:—"Henry Bell, an intelligent man of middle age, who, since he could carry a gun, has been a Wigeon shooter in Belfast Bay, visited Strangford Lough 'professionally' towards the end of February, 1844, with his punt and swivel gun. Hearing, on a dark night, the call of Wigeon, he fired towards the place whence the sound proceeded, and picked up a single bird, which differed in plumage from any he had ever seen. Its form at once marked this bird to his eye as a Wigeon of some kind, but in a state of plumage unlike that of the common species of either sex at any age; of this he was a good judge, from many hundreds having passed through his hands, and from his being very observant of the species of birds, and the changes of plumage which they undergo. He described it as a *Wigeon* in the plumage of a *Teal*. The large markings on the lower part of the sides of the neck and on the breast, instead of being roundish as in the *Teal*, were somewhat of a semicircular form, and varied in size, from 'one half to nearly the whole size of a man's finger nail.' On the top of the head it was whitish, like the old male Wigeon, but of a purer colour; and, like it, had the white marking on the wing; both characters denoting an old male bird of its species. On the figures of the American Wigeon in the works of Wilson (Jardine's Edition,) and Yarrell being shown to the shooter, he felt confident that his bird was of the same species; the former representing its plumage the better of the two, and the latter its form, as the neck was thicker than that of the Common Wigeon.

Although he thus noted the bird particularly, and, with another fowler who accompanied him to Strangford, held a kind of inquest on its species, it was unfortunately sold with his other wildfowl; as, from his having seen singular varieties of birds in the hands of bird-preservers, he thought this might be a remarkable state of plumage of the Common Wigeon: of a second species he had not at that time heard. He is certain of having killed birds of the same kind in Belfast Bay, but never any so far advanced towards adult male plumage. Placing entire reliance on the discrimination and accuracy of Bell, I have not hesitated to notice this bird as a visitant to our coast."

Wilson says that this Wigeon is "very common in winter along our whole coast (of North America,) from Florida to Rhode Island, but most abundant in Carolina, where it frequents the rice plantations." He farther states that "The Widgeon is the constant attendant of the celebrated Canvass-back Duck, so abundant in various parts of the Chesapeake Bay, by the aid of whose labour he has ingenuity enough to contrive to make a good subsistence. The Widgeon is extremely fond of the tender roots of that particular species of aquatic plant on which the Canvass-back feeds, and for which that Duck is in the constant habit of diving, (*Valisneria*, B. R. M.) The Widgeon, who never dives, watches the moment of the Canvass-back's rising, and before he has his eyes well opened, snatches the delicious morsel from his mouth, and makes off."

The note is like that of the Common Wigeon, and is syllabled by the letters 'whew.'

Pairing takes place in April, and they arrive on the coast of Hudson's Bay in May.

The eggs are six or eight in number, but we are ignorant of their size or colour.

The adult male has the bill slate-colour; the nail, black; irides, hazel; forehead and crown, creamy white; from the eye a band of dark green runs to the back of the neck. Neck, cheeks, and nape, yellowish white, thickly speckled with black; nuchal feathers, slightly elongated. Upper back and scapulars, black, minutely crossed with wavy lines of brownish red. Lower back, dusky brown; upper tail coverts, whitish, undulated with brownish red. Tail, brownish ash, a little elongated and pointed; primaries, brown; secondaries, green, edged with black, forming the speculum; tertials, black with white edges; shoulders, ashy brown, shading into the wing coverts, which become pure white at the edge of the speculum. Lower neck and upper part of breast, red brown, with a tinge of gray; lower breast, belly, and vent, white; under tail coverts, black. Legs and feet, brownish black.

In the female, the head and neck are minutely speckled with black on a yellowish white ground; the back, dark brown, the feathers slightly barred and edged with a paler shade; breast, paler in colour. Tail, shorter.

The adult male is one foot ten inches in length. The female but twenty inches.

The plate is taken from a beautiful drawing by John Gatcombe, Esq., of Wyndham Place, Plymouth.



EIDER DUCK.

EIDER DUCK.

ST. CUTHBERT'S DUCK. GREAT BLACK AND WHITE DUCK. DUNTON DUCK.

<i>Somateria mollissima</i> ,	.	.	.	LEACH.
<i>Anas mollissima</i> ,	.	.	.	LINNÆUS.
<i>Canard Eider</i> ,	.	.	.	TEMMINCK.

Somateria. Quære, *Soma*—A body, and *Pteron*—A wing; on account of its heavy flight?

Mollissima—Very soft, in allusion to the luxurious down of this species.

THE Eider Ducks have been long known and esteemed on account of the valuable down which they afford, and which possesses greater elasticity and warmth than that of any other genus of water-fowl.

The common Eider Duck is indigenous in the north of England and Scotland, and is occasionally met with all along the south and east coasts of England. One was also obtained at Sunning, near Reading, during severe weather.

In Ireland it is extremely rare.

It is abundant in Greenland, Iceland, Lapland, and all the northern parts of Europe, Asia, and America.

In Norway and Iceland the down is collected in large quantities. After the nest is made, and the eggs deposited in it, the eggs and down, with which the nest is lined, are taken. The female then repairs the nest, and deposits a second set of eggs, which are also removed. The same process is repeated a third time; but on this occasion the poor female having completely denuded herself of down, the male bird supplies the requisite quantity from his breast. This third set of eggs is left unmolested, and the birds bring out their young in security. The down thus procured is of a greatly superior quality to that taken from the dead birds, which is comparatively inelastic.

The Eider Duck is eaten by the Greenlanders, but we believe it is not much to be commended as an article of food, being rank and fishy.

The Eider Duck is an active and ready diver, and remains under water a considerable time, during which it is engaged in procuring the shell-fish on which it chiefly feeds. It is very maritime in its habits, and is rarely found at any distance from the sea-shore.

Its food consists of mussels, and other shelled mollusca, crustacea, marine insects, and small fish.

The nest, placed on the ground near the sea, is composed of dried sea-weed, and is lined with the warm down taken from the breast of the female, who adds to its quantity daily as the eggs are deposited, so that the eggs are entirely hidden under it.

The eggs are five in number, of a pale olive colour, smooth and shining, and measure three inches in length, by two inches and one line in breadth.

Incubation is completed in a month.

The Eider Duck is sociable in its habits, and the nests are frequently so closely placed together on the ground, that it requires care in walking not to injure them by treading upon them.

During incubation they are extremely tame, and the female will often suffer herself to be touched and handled without making off; the Drake, however, is said to show much alarm on these occasions, and will interpose himself between the aggressor and his fair partner, endeavouring to scare him from the nest by raising his head and making the most formidable noise he is acquainted with, which, however, is only a kind of cooing note.

In the adult male the bill, which is dusky green, is swollen and elevated at the base, and running high up in the forehead, has a band of feathers down the centre, nearly as far as the nostril; the nail is white; irides, brown. Upper part of head, velvet black, divided at the sides of the occiput by a greenish white band; cheeks, white; back of head and sides of neck, pale green. Neck, back, scapulars, lesser wing coverts, tertials, which fall handsomely over the wings, shoulder, and sides of rump, pure white; greater wing coverts, black; primaries, secondaries, and tail, brownish black. Upper neck in front, white; lower neck, creamy yellow; breast and under surface, black. Legs and feet, dusky greenish yellow.

The female is of a yellowish brown, with darker markings; primaries and tail, dusky black.

The weight is from six to seven pounds.

The male measures in length about twenty-seven inches.



STELLER'S WESTERN DUCK.

STELLER'S WESTERN DUCK.

WESTERN POCHARD.

<i>Somateria dispar</i>,	.	.	.	.	.	YARRELL.
<i>Fuligula dispar</i>,	.	.	.	.	.	SELBY.
<i>Polysticta Stelleri</i>,	.	.	.	.	.	EYTON.
<i>Canard de Steller</i>,	.	.	.	.	.	TEMMINCK.

Somateria. Quære, *Soma*—A body, and *Pteron*—A wing; on account of its heavy flight.
Dispar—Different.

ON the 10th. of February, 1830, a male specimen of this Duck was shot at Caistor, on the Norfolk coast: it is now in the Norwich Museum, to which it was presented by the Rev. G. Steward, into whose possession it came. A second male specimen is stated by Robert J. Bell, Esq., in the "Zoologist," to have been shot at Filby, (Quære Filey,) Yorkshire, on the 15th. of August, 1845, by Mr. G. Curzon, of Weston Lodge, Derbyshire, in whose collection it now is. The specimen was submitted to Mr. Yarrell's inspection. These are the only records we have of the occurrence of this very rare bird on our shores; and on the continent of Europe it is also extremely scarce. It has been met with a few times in Sweden; once in Denmark; and occasionally in Germany. It is found in Northern Asia, and on the north-west coast of North America, whence it derived its name of Western Duck.

With its habits we are unacquainted, except that it is said to be exclusively maritime.

Its food consists of marine mollusca, and crustacea.

It breeds in Kamtschatka, in lofty and inaccessible rocks, but nothing is known of its nest or eggs.

The adult male has the bill "brownish black; the irides, pale brown; round the eye a narrow ring of black; between the beak and the eye, and on the occiput, a patch of pale green; head, cheeks, and part of the neck behind, white; below the white on the neck, there is a collar of black, which ends in a broad stripe, passing the whole length of the middle of the back and upper tail coverts, this latter portion tinged with raven blue; the wing primaries, and tail feathers, brown; the secondaries, in part, white, with a steel blue outer web, forming a rich speculum, the terminal portions white; each

tertial feather white on the inner web, rich blue on the outer web, and curved downwards towards the end; wing coverts, white; scapulars elongated, and like the tertials, with the narrow inner web, white; the broader outer web, rich blue; chin and throat, rich brown; below the broad bluish-black collar is a narrow collar of white, the colour extending over the sides of the neck to each wing; just below the point of the wing, some of the white feathers have black at the tip, forming a dark patch;—middle of breast and belly, rich chestnut brown; passing off into a buff colour on the front, sides, and flanks; vent and under tail coverts, dark brown; legs, toes, and their membranes, black; the hind toe with a deep lobe.”—Yarrell.

The female “has the greater coverts and the secondaries tipped with white, forming two bars, enclosing between them a bluish-black speculum.”

The male measures nineteen inches in length.



KING DUCK.

KING DUCK.

KING EIDER.

<i>Somateria spectabilis</i>,	.	.	.	.	FLEMING.
<i>Anas spectabilis</i>,	.	.	.	.	LINNÆUS.
<i>Canard à tête grise</i>,	.	.	.	.	TEMMINCK.

Somateria. Quære, *Soma*—A body, and *Pteron*—A wing; on account of its heavy flight.
Spectabilis—Worthy of notice.

THIS large and very handsome Duck is extremely rare in this country; it was introduced into our list on the authority of the late Mr. Bullock, who informed Colonel Montagu, that he had met with it breeding on Papa Westra, one of the Orkney Islands, towards the end of June. One specimen was killed in 1827, upon the coast of Suffolk, at Aldborough; and was in the collection of J. D. Hoy, Esq., of Stoke-by-Nayland; we are not aware of any other specimen having been procured in England; but in Ireland, Mr. Thompson mentions four individuals as having been obtained; one at Kings-town Harbour, near Dublin, about the 1st. of October, 1837, which is now in the Dublin University Museum: another in the winter of 1843, at Derrynane, celebrated as the residence of Daniel O'Connell; another in Tralee Bay, in the winter of 1845-6: and the last on the 11th. of March, 1850, in Belfast Bay, which came under Mr. Thompson's immediate inspection. All these were either females, or young males. Mr. C. St. John states that it is very rare at the Kyle of Tongue, in Sutherland.

The King Eider is found in Norway, Sweden, and Denmark; in Iceland, and the Faroe Islands; and in fact in all the lands within the Arctic Circle, where it seems to take the place of the Common Eider.

They are fishy, but nevertheless are in much esteem by Arctic navigators, as affording wholesome fresh food in those inhospitable regions.

In their habits they are maritime; they form large flocks during the winter; the adult males by themselves; while the young birds of both sexes join the females. During the breeding-season they associate in large numbers, like the Common Eider, and their nests are very thickly placed on the ground. This species furnishes large quantities of valuable down, like the Common Eider.

The food of this species is similar to that of the Common Eider. The stomach of one examined by Mr. Thompson, contained "the remains of crustacea and mollusca, namely, an *Inachus* of middle size; the largest *Portunus arcuatus* that I had seen, (and perfect except the arms,) a *Nucula margaritacea*, and a small buckie-whelk, (*Buccinum undatum*.)"

Being of large size, they require close quarters and heavy shot to bring them down; but during the breeding-season they may often be knocked down with sticks.

In the adult male, the bill is vermillion colour, a narrow band of black feathers at the base. Irides, yellow; crown and nape, pale blue gray; cheeks, white, tinged with green; neck, upper portion of back and wing coverts, white; rest of back, and upper tail coverts, black. Tail, brownish black; primaries, secondaries, and tertials, dusky black; the latter fall over the wings; point of the shoulder, black; under the chin is a black line; the breast, buffy white; lower breast, belly, and vent, black; flanks, black, with an oval patch of white. Legs and feet, orange-colour.

The female has the bill greenish brown; general plumage, pale brown, with darker markings.

It weighs from three to five pounds.

It measures, in length, about two feet.



VELVET SCOTER.

VELVET SCOTER.

VELVET DUCK. DOUBLE SCOTER. GREAT BLACK DUCK.

<i>Oidemia fusca</i> ,	.	.	.	FLEMING.
<i>Anas fusca</i> ,	.	.	.	LINNÆUS.
<i>Canard double macreuse</i> ,	.	.	.	TEMMINCK.

Oidemia. *Oidema*—A swelling; as if referring to the inflated base of the bill.

Fusca—A dark colour—brown.

THE Velvet Scoter is met with only during the dreary months of winter, in the British Islands. In England it is decidedly rare; we have met with records of its occurrence in but few of the counties. One or two have been procured in Oxfordshire and Berkshire; in Cornwall, we are informed by W. P. Cocks, Esq., that it is but rarely obtained; in Devon it has also occurred occasionally. A few have been met with in Sussex, Norfolk, and Suffolk; in Northumberland it is not uncommon; and a pair have been noticed upon Windermere, in Westmoreland.

In Scotland it is by no means uncommon all round the coasts; and is also frequent in Orkney and Shetland.

In Ireland it occurs occasionally. Mr. Thompson has recorded instances of its occurrence near Drogheda, Dublin, Wexford, and Youghal.

Out of these islands, the Velvet Scoter is found in Denmark, Norway, Sweden, Russia, Siberia, Iceland, and the Faroe Islands; and as far to the south as Italy. It is also frequent on various parts of the north-eastern coasts of North America and Asia. Of the latter locality, Wilson, quoting from the "History of Kamtschatka," says "In the River Ochotska, they are so numerous, that a party of natives, consisting of fifty or more, go off in boats, and drive these Ducks up the river before them, and when the tide ebbs, fall on them at once, and knock them on the head with clubs, killing such numbers, that each man has twenty or thirty for his share."

The flesh of the Velvet Scoter is rank and strong-tasted, and it is consequently in but little esteem among civilized people; though the above extract would seem to show that it is by no means despised by the inhabitants of Kamtschatka.

In its habits it is maritime, seldom venturing far up the rivers. It dives with great facility, and is indifferent to the roughest sea. It flies heavily, and to no great distance. In diving for its food, it is often taken in the nets of the fishermen, getting entangled in the meshes.

Its food consists of shell-fish of various species; probably none that it can swallow come amiss to it.

The nests, according to Audubon, are "placed within a few feet of the borders of small lakes, a mile or two distant from the sea, and usually under the low boughs of the bushes, of the twigs of which, with mosses and various plants matted together, they are formed. They are large and almost flat, several inches thick, with some feathers of the female, but no down, under the eggs, which are usually six in number, measuring two inches and three-quarters in length, by one and seven-eighths in breadth, of a uniform pale cream-colour tinged with green."

In the adult male, the upper mandible of the bill is orange, the base and edges black; the lower mandible is yellowish white. Irides, pale cream-colour; the eyelid, and a small spot under and behind the eye, white. Secondaries, white, forming a band across the wing. The rest of the plumage is a brownish black. Tail, short and acuminate; legs and toes, red; membranes, brown.

In the female the bill is dusky; a white spot near the base of the upper mandible, and another behind the eye. The plumage generally is of a dusky brown, the tips of the feathers being lighter. The under parts are of a lighter shade.

The weight of the Velvet Scoter is about three pounds.

Its length is from twenty-two to twenty-three inches.



COMMON SCOTER.

COMMON SCOTER.

SCOTER. BLACK SCOTER.

<i>Oidemia nigra</i>,	.	.	.	.	.	FLEMING.
<i>Anas nigra</i>,	.	.	.	.	.	LINNÆUS.
<i>Canard macreuse</i>,	.	.	.	.	.	TEMMINCK.

Oidemia. *Oidema*—A swelling; as if referring to the inflated base of the bill.
Nigra—Black.

THE Black, or Common Scoter, is more generally distributed round our shores than the species just described; but in Scotland, Sir W. Jardine considers it the more uncommon of the two: in England and Ireland however, it is the Common Scoter of the coasts, and is to be met with in more or less abundance everywhere. It is usually considered a winter visitor, but Mr. Yarrell states that he and others have occasionally seen small flocks on the south coast during the summer months. These are probably either young birds, or else barren ones; large flocks of which, according to Audubon, remain as far south as the Bay of Fundy, in North America, during the summer.

The Common Scoter is found in all the northern countries of Europe, Asia, and America, breeding in the high latitudes, and migrating in winter to the more southern parts. It is common in France, Holland, and Scandinavia; and is met with as far south as Italy.

Like all the birds of similar habits, the Common Scoter is rank and fishy, but in Roman Catholic countries it is allowed to be eaten during Lent, as being considered to partake more of the nature of fish than fowl. In consequence of this, they are much sought after in France, and on some parts of the coast nets are spread over the beds of shell-fish which they frequent, and thus large numbers are taken, being entangled in the meshes when diving, and so drowned.

Mr. Yarrell gives a curious account of the way in which these birds are taken on the salt lakes, in the neighbourhood of Martigues, at the mouth of the Rhone. A kind of authorized *Battue* takes place; the people being called together, and organized by the mayors of the towns around. The gunners in boats surround the birds, and gradually

close on them, till at a signal, a few fire on the swimming birds, and on their taking wing, a general discharge takes place; the produce is then divided among the "*sportsmen!*" When the birds have re-assembled, the same process is repeated, again and again.

The Scoter is somewhat less maritime than the Velvet Scoter; being more frequently found at the mouths of rivers than that species. It is seldom met with on inland waters; but Mr. Yarrell mentions one being shot in Wiltshire, more than twenty miles from the sea; and T. G., of Clitheroe, records in "*Loudon's Magazine of Natural History*," that one was killed on the Ribble, on the 16th. of September, 1831, about forty miles from the sea. It is also not unfrequent about Oxford in winter; and has also been shot on Windermere. The Scoter flies heavily, and soon settles on the water again; but it dives well and powerfully, almost the whole of its food being obtained at some depth under water.

The food of the Scoter consists entirely of shell-fish. The stomach of one examined by Mr. T. Allis, of York, contained "a few whole middle-sized shells of *Tellina solidula*; a number of fragments of the same, and broken *Cardium edule*, or common cockle."

The nest is said to be formed of grass or sedge, and is lined with the bird's own down.

The eggs are six in number, of a pale greenish buff colour. They measure one inch and a half in length, by one inch and three-quarters in breadth.

When incubation has commenced, the males assemble in large flocks, and keep by themselves till the autumn.

In the adult male, the bill is black; except a line of reddish yellow on the centre of the upper mandible. Irides, dark hazel. The whole of the plumage is black, with purple reflections on the head and neck. Legs and feet, dusky black.

In the female, the upper parts are brownish black; the under parts lighter. Legs and feet, greenish brown; membranes, nearly black.

The length is about twenty inches.

SURF SCOTER.

<i>Oidemia perspicillata</i>,	.	.	.	.	FLEMING.
<i>Anas perspicillata</i>,	.	.	.	.	LINNÆUS.
<i>Canard marchand</i>,	.	.	.	.	TEMMINCK.

Oidemia. *Oidema*—A swelling; as if referring to the inflated base of the bill. *Perspicillata*.
Quære, *Perspicio*—To see plainly; on account of the distinctness of the species.

THIS is an extremely rare bird in this country; in England one was procured in a recent state, by Mr. Bartlett, of London, in, we believe, 1838; and in the winter of 1845, a mutilated specimen was found by W. P. Cocks, Esq., on the beach near the Magazine, Pendennis Castle, Falmouth, as recorded in "The Naturalist" for 1851. Specimens occasionally occur in Orkney and Shetland; and with respect to the latter islands, Mr. Robert Dunn, of Helister, thus writes in the "Zoologist," for 1848:—"Last summer, in June, as I was collecting through the north part of Shetland, I observed a very rare British visitor, namely a fine male specimen of the Surf Scoter, in 'Rona's Voe,' in company with some Red-breasted Mergansers. I tried to get a shot at it for three days in succession, but was unsuccessful, as it always got on the wing before we could get within gun-shot of it, and the fourth day I never saw it at all." On September 9th., 1846, Mr. Thompson says one was shot at Ballyholme, Belfast Bay, by Snowden Corken, Esq.; it was alone, about two hundred yards from the shore, allowed three shots to be fired at it before attempting to dive, and was killed at the fourth or fifth shot, on reaching the surface, after having dived.

A few specimens seem to have been obtained in Germany, Scandinavia, and Picardy, but they have been only stragglers; the natural haunts of this species being North America, where they are common. Wilson says "They continue on our shores during the winter, and leave us early in May for their breeding-places in the north. They are shy birds, not easily approached, and are common in winter along the whole coast from the River St. Lawrence, to Florida."

Their flesh is rank, coarse, and fishy.

In their general habits, they do not materially differ from the preceding species, but, according to Wilson, they are altogether confined to the shores and bays of the sea,

particularly where the waves roll over the sandy beach. They are constantly diving in search of food, and seldom or never visit the salt marshes.

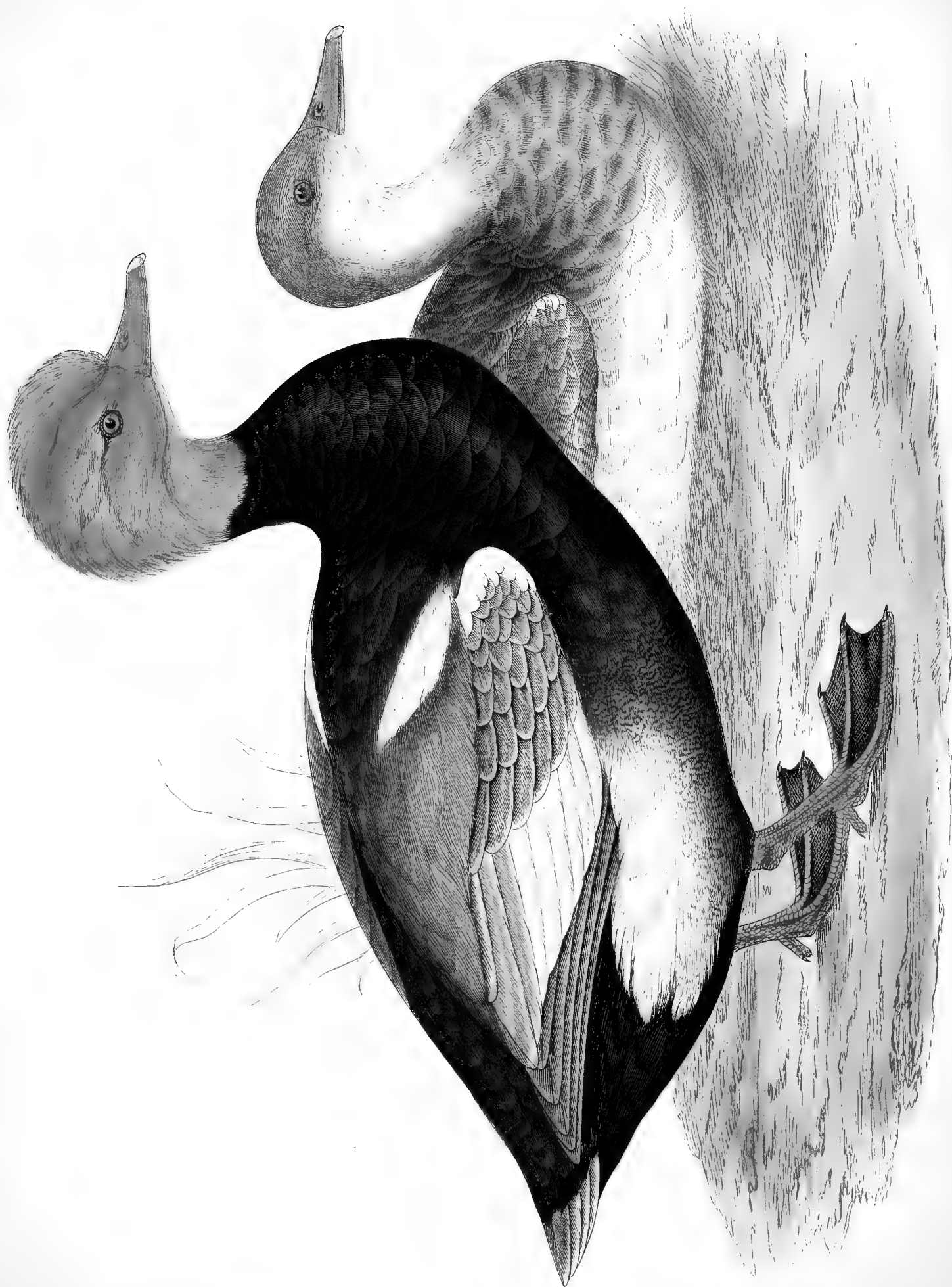
Their food consists of shell-fish. The stomach of the specimen recorded by Mr. Thompson, contained "ten perfect specimens of the bivalve shell, *Nucula margaritacea*, from small to adult size, and a portion of the shell of a very large *Solen pellucidus*, with fragments of the shells of other species."

They breed in the extreme north, but Audubon found one nest at a little distance from the Gulf of St. Lawrence, five miles and a half from the sea. He says, "The nest was snugly placed amid the tall leaves of a bunch of grass, and raised fully four inches above its roots. It was entirely composed of withered and rotten weeds, the former being circularly arranged over the latter, producing a well-rounded cavity six inches in diameter, by two and a half in depth. The borders of this inner cup were lined with the down of the bird, in the same manner as the Eider Duck's nest, and in it lay five eggs; the smallest number I have ever found in any Duck's nest. They were two inches and two and a half eighths in length, by one inch and five-eighths in their greatest breadth, more equally rounded at both ends than usual: the shell perfectly smooth, and of a uniform pale yellowish, or cream-colour."

In the adult male, the bill is yellowish red, with a square patch of black on each side at the base; irides, white, or very pale cream-colour; on the crown and back of the neck, are two patches of white. The whole of the rest of the plumage shining black. Legs and feet, deep red; membranes, black.

The female has the bill dusky, and the whole plumage of a brownish black, lightest about the neck and under surface. The feet gray brown.

The length is about twenty or twenty-one inches.



RED-CRESTED WHISTLING DUCK.

RED-CRESTED WHISTLING DUCK.

RED-CRESTED POCHARD.

<i>Fuligula rufina</i>,	.	.	.	.	.	STEPHENS.
<i>Anas rufina</i>,	.	.	.	.	.	PALLAS.
<i>Mergoides rufina</i>,	.	.	.	.	.	EYTON.
<i>Canard Siffleur Huppé</i>,	.	.	.	.	.	TEMMINCK.

Fuligula. Fuligo—Soot; from the colour of some of the species. *Rufina*, from *Rufus*—Red.

THIS very handsome Duck is one of considerable rarity in Britain; though specimens are occasionally met with during the winter months. It was first noticed by Mr. Yarrell, in 1826; in the January of which year a male was shot near Boston, while feeding on fresh water along with some Wigeon. Several others were obtained during the same winter in the London market. It has since occurred at Yarmouth; Colchester; on the Thames, at Erith, in Kent, one shot out of a flock of eighteen; one on Hornsea Mere, in Norfolk, on January 12th., 1844, as recorded by J. H. Gurney, Esq., in the "Zoologist," where he gives the following particulars:—"Mr. Rising, in whose possession the bird now is, informs me that it was killed rather early in the morning, and that it was quite alone and extremely tame. This specimen was a male bird, in the fullest adult plumage, and when newly killed was as beautiful a bird as I have ever seen. The beak was of a most splendid vermillion red colour, the nail of the beak being also red, but paler than the rest. The colouring of the beak began to fade soon after the bird was mounted, as also did another beauty which was apparent when the bird was first killed, and which consisted of a wonderfully elegant tinge of rose-colour, which pervaded the whole of the white parts of the plumage, especially the two large patches on the back above the shoulders." Another specimen was shot at Swanpool, near Falmouth, February, 1845, and sold in the market for sixpence, as recorded by W. P. Cocks, Esq., in "The Naturalist" for 1851.

On the continent it has occurred, but apparently rarely, in most of the middle and southern countries. It is said to be resident in Sicily, and to breed there. It has also been met with in Northern Africa; around the Caspian Sea, in the Himalaya, at Calcutta, Nepaul, and in the Duckun.

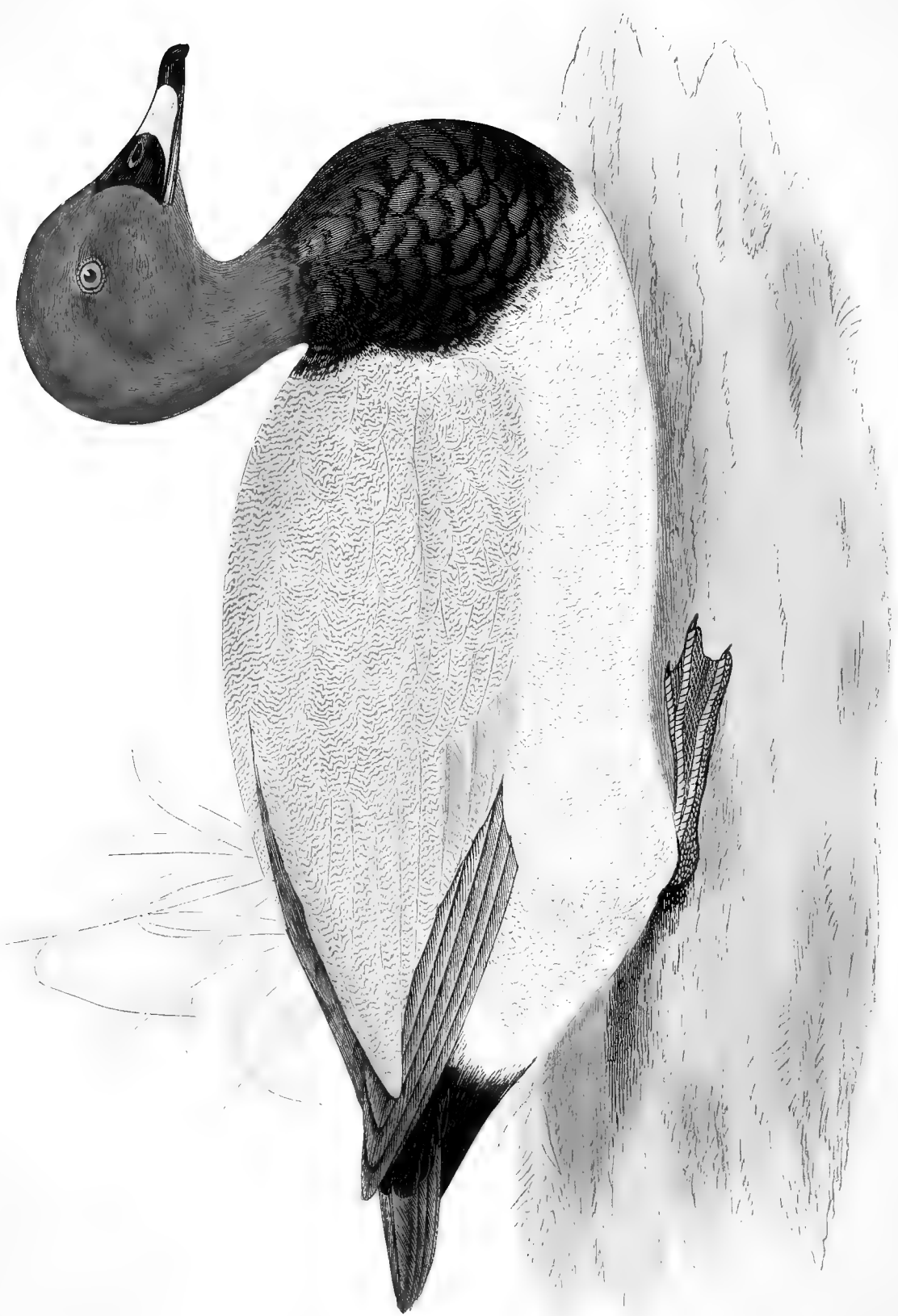
Its food consists of shell-fish, insects, and water-plants.

Of its nesting we know nothing; but it is said, as above stated, to breed in Sicily, and to lay six or eight eggs, which are of a greenish white colour.

In the adult male, according to Mr. Yarrell, "the beak is vermillion red; the nail, white; (nail, red, but paler than the rest.—J. H. Gurney.) The irides, reddish brown; the whole of the head, and the upper part of the neck all round, rich reddish chestnut; the feathers on the top of the head, considerably elongated, forming a conspicuous crest; the back of the neck below, and the upper tail coverts, dark brown; the back, and a portion of the scapulars, wing coverts, and tertials, yellowish brown; a white patch on the carpal joint of the wing, and another over the joint. Greater coverts, ash brown; wing primaries and tail feathers, greyish brown; the secondaries with the outer webs white, forming a speculum. Front of the neck, breast, belly, and under tail coverts, rich dark brown; the sides and flanks, white; legs and toes, vermillion red; interdigital membrane, almost black.

The female is without a crest; the top of the head, dark brown; cheeks, throat, and sides of the neck, greyish white; upper surface of the body, pale rufous brown; point of shoulder and the speculum, greyish white; breast, reddish brown; the other parts of the under surface, greyish brown; beak and legs, reddish brown."

The length of the adult male is twenty-two inches.



POCHARD.

DUN BIRD. POCHARD DUCK. RED-HEADED POCHARD. COMMON POCHARD.
 RED-HEADED POKER. RED-EYED POKER.

<i>Fuligula ferina</i>,	.	.	.	.	.	STEPHENS.
<i>Anas ferina</i>,	.	.	.	.	.	LINNÆUS.
<i>Nyroca ferina</i>,	.	.	.	.	.	FLEMING.
<i>Canard milouin</i>,	.	.	.	.	.	TEMMINCK.

Fuligula. *Fuligo*—Soot; from the colour of some of the species. *Ferina*—Venison;
 probably from its fine flavour.

GREAT numbers of these excellent birds find their way into all our markets; they arrive in this country the end of September, or early in October, and leave us again in the spring; though a few remain behind to breed in Norfolk: Scoulton Mere, in that county, has on many occasions been chosen by them for the purposes of incubation. They are very generally distributed over the British Isles, but are less abundant as you proceed northwards.

On the continent they are generally distributed over the southern portions, and are found in Denmark, Sweden, and Russia. It occurs also in Egypt, India about Calcutta, and North America.

For the table this Duck is one of the very best, being considered very little, if at all, inferior to the celebrated Canvass-back Duck of America.

The Pochard chiefly frequents the sea-coasts, estuaries of rivers, our larger rivers, and the large low-lying inland lakes or meres, to be found in some of our counties, as Norfolk. They are admirable divers, and many of them escape from the pipes of the decoy by diving back into the open water, yet, their numbers being very great, a considerable quantity is taken among the other ducks in the decoys. They swim with a good deal of the body immersed in the water. It is a shy bird, and dives rapidly when alarmed. It is difficult to take when wounded, as it dives with great power; and if wounded on the land it invariably makes towards the water, in hope of being able to escape in that way. They feed almost entirely during the night. Their note is a low whistle, but when alarmed they utter a harsh croaking noise.

The food of the Pochard consists of shell-fish; a large portion of green vegetable matters, oats, when attainable, and seeds of various kinds. Sand and gravel are also always present.

The nest is placed in some tuft of reeds, rushes, or coarse herbage, and contains ten or twelve eggs, which are of a buffy white colour, and measure two inches in length, by one inch and five-eighths in breadth.

The Pochard is readily tamed, but we have not heard of its breeding in captivity. Mr. C. St. John gives the following account of one in his possession:—"The Pochard which I brought home from Spynie, remains quite contented, and goes about with the other Ducks. He will eat whatever they feed upon, but prefers worms to everything else, showing great activity in diving for them when they are flung into the water. If they are given to him on land, he usually carries them to the water before eating them."

In the adult male the bill is bluish gray in the centre; black at the base and tip. Irides, cherry red. Head and neck, rich chestnut colour. Lower neck and breast, deep dusky black. Back, scapulars, greater and lesser coverts and tertials, pale gray; with minute wavings and specks of dark gray. Primaries, clove brown; gray towards the base. Secondaries, gray, tipped with white. Rump and upper tail coverts, and tail, black; belly, pale gray, with minute wavings of a darker shade; vent, black. Legs and feet, blue gray; the membranes of a darker shade.

The female has the bill black; head and neck, dusky brown, paler on the throat; back, darker and more uniform in colour than in the male; lower neck and breast, dark ash brown; belly and vent, pale gray; under tail coverts, dark gray.

The weight of the adult male is about two pounds one or two ounces.

The length, nineteen to twenty inches,

PAGET'S POCHARD. (*Fuligula ferinoides*.) Bartlett.

THREE specimens of this Duck have been obtained: one in Norfolk, the others in the London market, we believe. Mr. Yarrell has described it as the American Scaup, *Fuligula mariloides*, Vigors. It however differs so little from the Scaup, that it is unnecessary for us to do more than refer to an article in the "Zoologist," page 1778, for a full account of the bird; and to Mr. Yarrell's description, in his "British Birds."



FERRUGINOUS DUCK.

FERRUGINOUS DUCK.

RED DUCK. WHITE-EYED DUCK. CASTANEUS DUCK. NYROCA POCHARD.

<i>Fuligula nyroca</i>,	.	.	.	.	STEPHENS.
<i>Anas ferruginea</i>,	.	.	.	.	GMELIN.
<i>Anas nyroca</i>,	.	.	.	.	BEWICK.
<i>Nyroca leucophthalmus</i>,	.	.	.	.	FLEMING.
<i>Canard à iris blanc</i>,	.	.	.	.	TEMMINCK.

Fuligula. Fuligo—Soot; from the colour of some of the species. *Nyroca*—.....?

THIS Duck, which is only occasionally obtained, is a winter visitor to these islands. In Scotland it is very rare, and in England it has only been met with on the eastern side of the island; specimens having been procured in Yorkshire, as noticed at Redcar, by T. S. Rudd, Esq.; in Suffolk, as recorded by F. W. Johnston, Esq., of Ipswich; and in Oxfordshire, two specimens in 1832, and one in 1847. In the London markets, these birds may be not very unfrequently picked up; and they are stated by Mr. Yarrell, generally to come from the Norfolk and Suffolk coasts.

On the continent it appears to be rare, frequenting rather the southern portions than the northern, and being resident in Corfu, Crete, and Sicily. It is said to visit northern Africa, Persia, and India.

It is stated to be excellent eating.

Of its habits little or nothing is known, but they are probably similar to those of the Scaup and Pochard.

Its food consists of aquatic plants, seeds, frogs, and insects.

The nest is said to be placed near rivers and marshes.

The eggs are reported to be nine or ten in number, to be of a greenish white colour, and to measure two inches and one-eighth in length, by one inch and a half in breadth.

Mr. Yarrell believes he has noticed a hybrid between this species and the Pochard.

In the adult male the bill is bluish black; irides, bluish white. Head, neck, breast, and flanks, are dull chestnut-colour; back, wings, and tail, umber brown; the primaries being of a more dusky shade. Secondaries, white, tipped with black, forming a white

bar across the wing. Lower breast and belly, yellowish white; vent, gray brown; under tail coverts, white. Legs and toes, as the bill; the membranes being darker.

The female differs but little from the male. The head and neck are darker, and the belly less pure in colour than in the male.

The length of the male is about sixteen inches.

The female is rather less.



SCAUP DUCK.

SCAUP DUCK.

SCAUP POCHARD. NORWAY DUCK. WHITE-FACED DUCK, (THE YOUNG.)

<i>Fuligula marila</i>,	.	.	.	.	.	STEPHENS.
<i>Nyroca Gesneri</i>,	.	.	.	.	.	WILLUGHBY.
<i>Anas marila</i>,	.	.	.	.	.	LINNÆUS.
<i>Nyroca marila</i>,	.	.	.	.	.	MONTAGU.

Fuligula. *Fuligo*—Soot; from the colour of some of the species.*Marila*—Sparks that fly from hot coals.

TOWARDS the latter end of October, the Scaups begin to arrive on our shores, preferring the low and muddy estuaries of our low-laying rivers, to those of a more picturesque and bold character. In Ireland it seems to make its appearance at an earlier period, Mr. Thompson stating that it was observed in Belfast Bay, at the end of August, 1837, and from 1838 to 1844, at dates varying from the 14th. to the 29th. of September; the 29th. being the latest date of its first appearance in that district. In Belfast Bay they frequently remain as late as the second week in May, before taking their departure for the north, to breed; but some few remain even later, probably with the intention of breeding, if allowed; this would seem to have been the case with a pair seen by Mr. Thompson, the first week in June, 1840.

The Scaup is pretty evenly distributed round all the shores of England, Scotland, and Ireland.

It frequents all the maritime countries of Europe, especially those of the northern parts; and is common also in North America.

It is not in much esteem for the table, being strong and fishy in taste.

In its habits it is considerably maritime, seldom straying far from the coast, and frequenting chiefly the flat muddy shores peculiar to some parts of our coast, where large tracts are left uncovered by the receding tide. It is an admirable diver, and obtains its food, we believe, exclusively by this method. When approached it endeavours to escape by swimming, not by diving, and if hard pressed will take to wing. Although generally considered an extremely wary bird, it seems to be so rather by education than

habit; thus the Rev. James Smith, in speaking of their first appearance on the Dovert, in Banffshire, says, "On their first arrival, I have approached the brink of the river, and have stood looking at them at the distance of only a few feet. They seemingly took no notice of the circumstance, continued their movements, and appeared wholly unconscious of danger. After a lapse of a few days, however, having experienced probably how formidable an enemy is man, they became as wary and as difficult of approach as at first they were heedless and undismayed by the vicinity of a human being: this circumstance would tend to show that they had come direct from a region where man is not to be seen." The Scaup flies but slowly, and rises from the water with some little difficulty, in consequence of the shortness of its wings. Montagu, in speaking of some that he kept in confinement, remarks, that they "had the same singular toss of the head, attended with an opening of the bill, which, in the spring, is continued for a considerable time while swimming and sporting on the water. This singular gesture would be sufficient to identify the species were all other distinctions wanting."

The food consists chiefly of shell-fish, aquatic insects, small fish, and a small proportion of vegetable matters.

The nest is of a very slight description, and is placed near the edge of the water, among coarse grass or reeds, or else among large stones. The eggs are covered with a little down.

The eggs are five or six in number, of a yellowish brown colour; and measure two inches and three-eighths in length, by one inch and five-eighths in breadth.

The Scaup is easily tamed, and feeds readily if its food be thrown into water.

In the adult male the bill is pale blue, the nail, black. Irides, yellow, Head, neck, breast, and upper back, black; the head and neck reflecting green and purple. Mantle and scapulars, white; beautifully marked with waving lines and specks of black. Rump and upper tail coverts, black; tail, dusky black. Primaries, black; secondaries, white, forming the speculum, and tipped with black. Wing coverts and tertials, gray; belly and flanks, white; under tail coverts, black. Legs and feet, bluish gray; the membranes darker.

In the female the bill is lead-colour, with a broad band of white round the base. Head and neck, dark umber brown; lower neck and breast, darker; upper parts, dusky black; with transverse waving lines of white. Belly and vent, white; under tail coverts, dusky.

The length of the adult male is about one foot six inches.



TUFTED DUCK

TUFTED DUCK.

TUFTED POCHARD.

<i>Fuligula cristata</i>,	.	.	.	.	.	STEPHENS.
<i>Anas fuligula</i>,	.	.	.	.	.	LINNÆUS.
<i>Canard morillon</i>,	.	.	.	.	.	TEMMINCK.

Fuligula. Fuligo—Soot; from the colour of some of the species.

Cristata—Having a crest.

THIS beautiful little Duck is very readily distinguished from any of our other *Anatidæ* by its colour and elegant crest. It is a winter visitant to Britain, and is one of the latest arriving on our shores. In Belfast Bay, December is considered early; and we have noted January 29th., 1848, as the first time of its appearance in the York market in that year. The end of April, or early in May, is usually the latest time for its departure. It is distributed pretty generally round the coasts of England, Scotland, and Ireland.

On the continent they are winter visitors to the southern and central states; breeding in small quantities in Holland and Sweden; but the general breeding resort is not known.

Of its edible qualities we have various accounts; some pronouncing them very excellent, others considering them as but indifferent eating. From our own personal experience, we pronounce them excellent. A note on the subject written several years since, states that it was "tender and delicate in flavour." It is probable that much depends on the previous feeding of the birds; those chiefly fed upon shell-fish would be but poor eating, while those feeding for some time inland, would probably be as we found the bird above referred to, which was shot about six miles from the city of York.

Its habits lead it to ascend rivers, and frequent inland lakes, more than some of its congeners. They are less shy than the Scaup, and do not readily take to flight when quietly approached; rather swimming away to escape danger. They are usually in very small parties of from four to eight or ten birds; but occasionally assemble in flocks of more than one hundred. Mr. Thompson thus relates an interesting anecdote illustrative of the sagacity of this species in knowing its friends from its enemies:—"In my young

days, a Duck, most probably of this species, came in the month of October, to a pond at Wolf-hill, covering, perhaps, an English acre—I have obtained Tufted Ducks killed on still smaller ponds—and remained a week. Such an occurrence being quite a novelty, the members of the family were so pleased watching the bird, that care was taken it should not be disturbed. The visitor then departed, and, as we feared, altogether; but not so, for it soon returned with two or three companions. After remaining a short time, they all went off and re-appeared in a day or two, when the number was increased to seven or eight, which continued there for two or three weeks. So persecuted are these poor birds almost everywhere they appear, that it is interesting thus to see how they avail themselves of a locality in which they are unmolested. A female bird of this species, kept in the pond at the Falls, with a number of other wildfowl, was of a gentle quiet disposition.”

The food consists of small shell-fish, seeds of different kinds, various vegetable matters, and insects. Seeds and grain will be preferred when attainable.

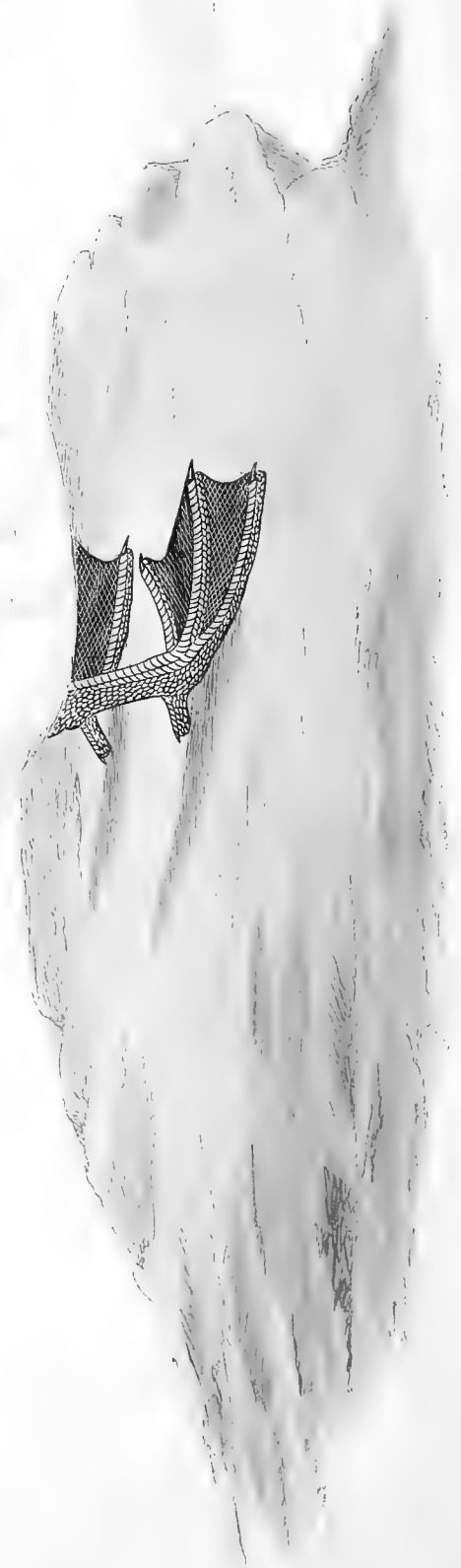
The nest is placed among reeds or rushes, at the edge of inland lakes and meres.

The eggs, eight or ten in number, are of a pale greenish buff colour, and measure two inches and one-eighth in length, by one inch and three-eighths in breadth.

In the adult male, the bill is bluish gray; the nail, black. Irides, bright gamboge yellow; head, rich black, reflecting green and purple; nuchal feathers, elongated into a handsome crest; neck, upper breast, and upper back, black; back, scapulars, and tertials, also black, but minutely speckled with yellowish dots; rump and tail, black. Wings, dusky black, with a white speculum. Lower breast, black, each feather tipped with white; belly and flanks, white. Vent, mottled black and white; under tail coverts, dusky black. Legs and toes, blackish blue; membranes, black.

The female has the parts which are black in the male, of a dark umber brown; the under parts of a greyish white.

The length of the adult male is about seventeen inches.



LONG-TAILED DUCK

LONG-TAILED DUCK.

NORTHERN HARELD. CALLOO.

<i>Clangula glacialis</i>,	.	.	.	.	.	FLEMING.
<i>Fuligula glacialis</i>,	.	.	.	.	.	YARRELL.
<i>Anas glacialis</i>,	.	.	.	.	.	LINNÆUS.
<i>Canard de Mielon</i>,	.	.	.	.	.	TEMMINCK.

Clangula. Clango—To sound as a trumpet.*Glacialis*—Frequenting the ice.

THIS pretty Duck is a winter visitor to our shores, very rare on the southern coasts, but becoming more common in the north, and in Scotland being found in tolerable abundance.

In Ireland it is also a winter visitor, but in limited numbers. They usually make their appearance here during October or November, but specimens have occasionally been met with in September, and even August; they leave for their northern migration by about March.

On the Continent it is common in the northern countries, but becomes rarer as you go southward, till in Italy and Switzerland, its occurrence is only recorded on one or two occasions.

Their flesh is fishy in taste, as might be anticipated from their habits.

The Long-tailed Duck is a lively and restless bird in its habits, being almost constantly on the move. They frequent the sea, at no great distance from the shore; and but rarely ascend the rivers. Their flight is rapid; and they are shy and not easy of approach. They are powerful divers, and readily obtain their food in water of from three to four fathoms deep. On our coasts they are usually found in small flocks of three or four, and one always remains on the surface as sentinel, while the others are diving in search of food.

The note, in these countries, is usually considered to resemble the word "calloo," and the bird is consequently known by that name in many places.

The food consists of shell-fish of various species: the following have been noticed by Mr. Thompson. *Rissoa ulvæ*; *R. labiosa*; *Lacuna quadrifasciata*; *Cerithium reticulatum*;

Nucula margaritacea; some of the *Mytili*; together with shrimps, (*Crangon vulgaris*.) and other small crustacea.

They breed in the extreme northern regions, as round Hudson's Bay.

The nest, which is placed near the edge of some small lake, is composed of a few stems of grass, and is lined with the down of the female, which is said to be equally valuable with that of the Eider Duck.

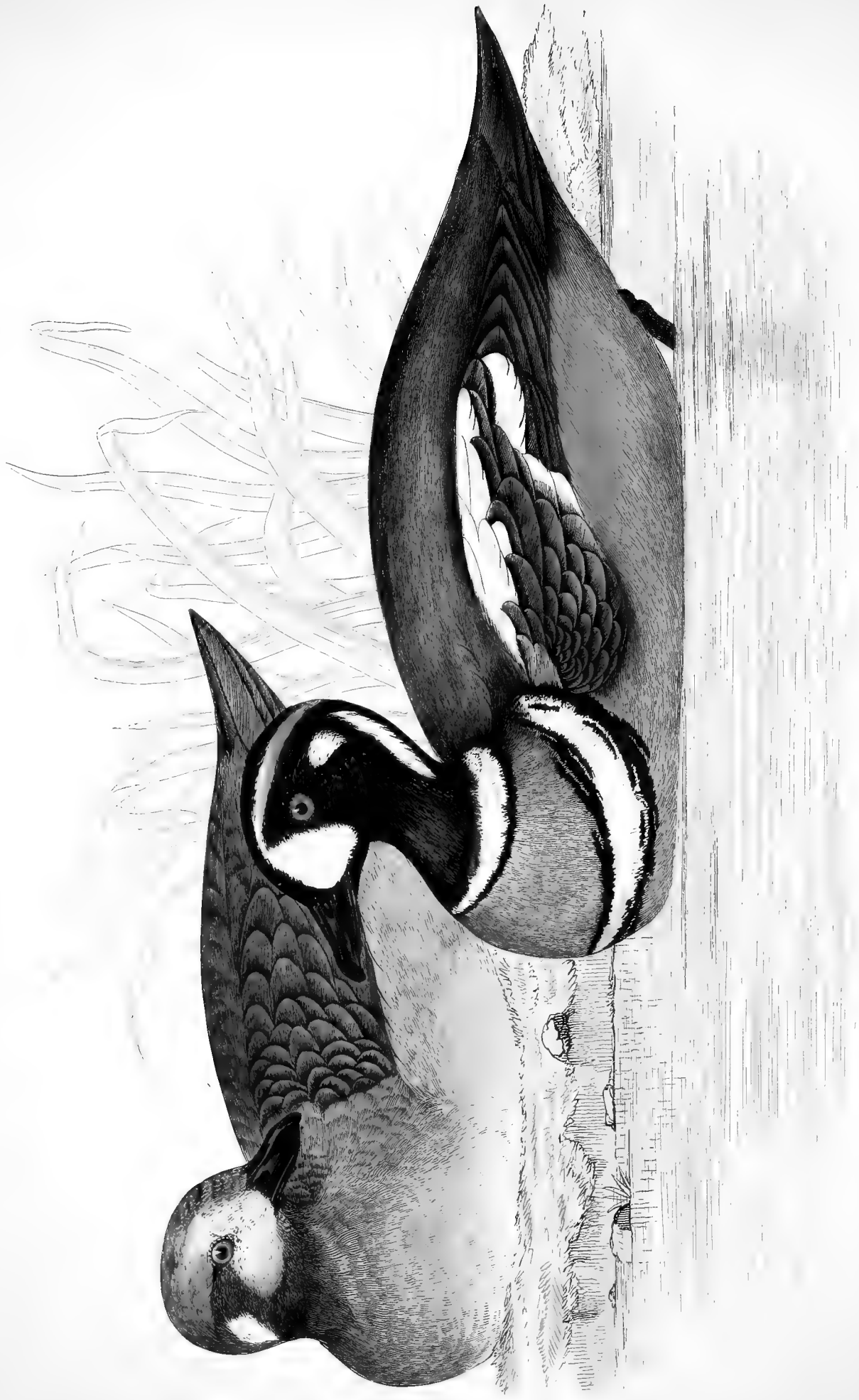
The eggs, which are from ten to fourteen in number, are of a bluish white colour, (Yarrell says greenish white, with a tinge of buff,) and measure two inches and one-sixth in length, by one inch and a half in breadth.

The following description of the winter plumage of the adult male, taken from a very fresh and fine bird, by Mr. Thompson, we give in his own words:—"Bill, the nail, and half of the side of the upper mandible next its base, black, while the whole upper surface and anterior part of the side were of a deep rose-colour. Irides, very light yellowish hazel; cheeks and ear coverts, pale grayish drab, except a small space of pure white margining the eye. Forehead, pale gray, which colour also extends round the throat, and continues downward so as to margin the entire inner or lower side of the dark chestnut brown patch on each side of the neck. Central line of lower part of throat, between the two approximating edges of the chestnut patch, white. Top of head, very pale buff; back and lower part of neck all round, pure white, which colour extends down between the 'shoulders.' Scapulars and sides beneath the wings, or 'flanks,' pale slate-colour; entire breast, dark chestnut brown, of the same hue as the patch on the head; belly and under tail coverts, white. Tail feathers—two outer pair pure white, the three next, with a dark longitudinal line near the centre, becoming gradually broader in those approximating the middle of the tail; the second longest pair all black, except a narrow line of white on each side of their basal portion; the longest pair wholly black. Tarsi and toes, very pale lead-colour; webs, grayish black; nails, blackish."

In the summer it is said to have the forehead and cheeks gray wood brown; "centre of the crown, black; the occiput and chin, white; the neck, breast, and upper parts of the belly, deep pitch black; lower belly, sides, and under tail coverts, pure white. The upper part of the back and long scapulars are black, with broad margins of reddish brown; the mantle, lower back, rump, and upper tail coverts, wings and tail, deep brownish black. The secondaries have the outer webs tinted with reddish brown, forming an indistinct speculum."—Jardine.

In the female, the forehead, crown, nape, and patch on the neck, are brown. Back and wings, dark brown; primaries and tail, black; neck and upper breast, yellowish brown; lower breast, belly, vent, and under tail coverts, pure white. The longest feathers of the tail are also wanting.

The male measures twenty-two inches in length. The female but sixteen inches.



HARLEQUIN DUCK.

HARLEQUIN DUCK.

HARLEQUIN GARROT.

<i>Clangula histrionica</i>	.	.	.	.	FLEMING.
<i>Fuligula histrionica,</i>	.	.	.	.	YARRELL.
<i>Anas histrionica,</i>	.	.	.	.	LINNÆUS.
<i>Canard histrion,</i>	.	.	.	.	TEMMINCK.

Clangula, from *Clango*—To sound as a trumpet.

Histrionica. *Histrion*—A stage actor, a harlequin.

THE great beauty of the plumage of this bird has rendered it more generally known than the great rarity of its occurrence on our shores would lead us to expect. The first pair of which we have any record, as occurring in this country, was obtained by Lord Seaforth, in Scotland, at the commencement of the present century. One was also shot on one of the Orkney Islands, by Mr. Simmons. We next hear of one occurring in Devonshire, in 1830, as mentioned by E. Moore, M. D. Mr. Yarrell afterwards obtained two young females in the London market. One has been procured at Yarmouth, in Norfolk. One in Cheshire, in 1840; and in the winter of 1846-7, a small flock was observed for some time about Torquay, in Devonshire, by Dr. R. Battersby, of that place, who was fortunate in securing a male and female. We are not aware of any other specimen having been met with.

The Harlequin Duck inhabits the northern parts of Europe, Asia, and America; breeds in Iceland, and occasionally visits France and Germany.

As a bird for the table, it is said to be excellent.

Little is known as to its peculiar habits; but it is said to be very expert in diving, and to swim well: it also flies rapidly.

Its note is a whistle.

The nest, according to Audubon, who had several opportunities of remarking their habits in this respect, is placed under bushes and among grass, at the distance of twenty or thirty yards from the water, (speaking of the shores of the Bay of Fundy.) Farther north they frequent, for the purposes of incubation, small lakes and rivulets a mile or two inland. The nest is composed of dry herbage, lined with fine grass.

The eggs, five or six in number, are of a plain greenish yellow colour, and measure two inches and one-sixteenth in length, by one inch and nine-sixteenths in breadth. The female covers them with down, as the Eider does, after they are deposited.

"The male leaves her to perform the arduous, but, no doubt, to her pleasant, task of hatching and rearing the brood, and joining his idle companions, returns to the sea-shore, where he moults in July and August."

In the adult male the bill is dark lead-colour; the point, red. Irides, dark red; forehead and crown, black. From the bill to the eye, and a streak over the eye, white; the latter shading into red. The rest of the head and neck, black; except a patch over the ear coverts and a streak on each side of the neck, which are white, as well as a circle at the bottom of the neck. Back, wing coverts, and rump, dark slate-colour. Tail, dull black; primaries, dusky black; secondaries and scapulars, white. Breast, bluish gray, below which is a crescent of white, edged with black on each side. Belly, blackish gray; vent, black; sides, rufous. Legs and feet, bluish gray; the membranes darker.

The female has the forehead, cheeks, and patch over the ear, impure white; upper parts brown; neck and breast, paler, mottled with reddish brown; belly, nearly white.

The young males resemble the females during the first year.

The length of the male is seventeen inches.

The female measures but fourteen inches.



GOLDEN EYE

GOLDEN EYE.

GOLDEN EYE DUCK. GOLDEN EYE GARROT. COMMON GOLDEN EYE.
 RATTLE-WINGS. MORILLON, (THE YOUNG?)

<i>Clangula vulgaris,</i>	.	.	.	.	LEACH.
<i>Anas clangula,</i>	.	.	.	.	LINNÆUS.
<i>Canard garrot,</i>	.	.	.	.	TEMMINCK.

Clangula. Clango—To sound as a trumpet.

Vulgaris—Common.

THIS handsome Duck is a winter visitor to our shores, and seems to be pretty generally distributed round the coasts of England, Ireland, and Scotland. It is by no means rare, at least in the young male and adult female state; but the adult males are much less frequently procured.

On the Continent, the Golden Eye is generally distributed in the winter, and breeds in all the northern countries. It is also common in Northern America and Asia.

As a bird for the table the Golden Eye is not generally much esteemed; we think, however, that after feeding for some time inland, they are by no means to be despised: the improvement probably arises from their taking a larger proportion of vegetable food, than when feeding on the coast.

The note is very loud and sonorous, from which it derives its generic name.

The Golden Eye frequents estuaries of rivers, and often ascends rivers to some little distance from the sea. They will even at times be found on entirely inland waters, in which case, as above observed, they are much improved in flavour. They dive with remarkable quickness and strength. They occasionally assemble in flocks of one hundred or more; but are more commonly found in small parties of from five to twenty or thirty. If only slightly wounded, the Golden Eye is very difficult to obtain, so great are its diving powers. Should a small flock of these birds be observed within shot of the shore, the most successful plan is, when they dive, which they do altogether, to run towards the nearest point of approach; when they rise to the surface, instantly crouch down; when they dive, again run, and so on till you are within shot when they rise; you must then make the most of your time, for they will often dive from the flash

of the gun before the shot has time to reach them, even when within a very few yards. Mr. Yarrell states that on such occasions one bird always remains up as sentinel. This may have been the case in some locality where they were much disturbed, as we believe the above is their more usual mode of proceeding.

The food consists of small fish, shell-fish of various species, cray-fish, and all the smaller crustacea that fall in its way. Minute entomostraca and leeches, seeds and vegetable matters, when it is feeding inland, are also found in the stomach; and sand or gravel is always present.

The nest of the Golden Eye is placed in the hole of a tree. When in Norway, Mr. Hewitson found one in the abandoned hole of the Great Black Woodpecker, (*Picus martius*,) twelve feet from the ground. The opening was so small, that the hand could hardly be introduced. The lining was the bird's own down.

The eggs are green, and measure two inches and three-eighths in length, by one inch and five-eighths in breadth.

In the adult male the bill is bluish black; irides, golden yellow. Head and upper part of neck, glossy green, the feathers erectile; behind the base of the bill is an oval white patch, very conspicuous, even in flight; chin, black; back and tertials, black; scapulars, white, edged with black. Tail, dusky black; primaries, black; secondaries, white. Wing coverts, black at base, white at the ends; lower neck, breast, belly, and vent, white; flanks, dusky. Legs and feet, orange; webs, dusky.

The female is less in size than the male. Bill, brown, orange at the tip; head and neck, brown, with a collar of white below; breast, gray; under parts, white; the upper parts are dusky. The white on the wings less clear than in the male, being mixed with brown.

Young males are much like the females, but are larger, and the rudiments of the white patch on the cheek may be seen.

The male weighs about two pounds and a quarter.

He measures nineteen inches in length.

The female measures two inches less.



BUFFLE-HEADED DUCK.

BUFFEL-HEADED DUCK.

BUFFEL-HEADED GARROT. BUTTER BOX, OR BUTTER BALL. SPIRIT DUCK.

CONJURER.

<i>Clangula albeola,</i>	.	.	.	.	.	JENYNS.
<i>Anas albeola,</i>	.	.	.	.	.	LINNÆUS.
<i>Fuligula albeola,</i>	.	.	.	.	.	BONAPARTE.

Clangula. *Clango*—To sound as a trumpet. *Albeola.* *Albeo*—To appear white; whitish.

THIS, which is a North American species, has only occurred, as far as we are aware, on three occasions within the limits of these islands. The first is mentioned by Donovan, in his "British Birds." The second was procured near Yarmouth, in Norfolk, in 1830. Mr. Yarrell states that the Rev. Richard Lubbock believes that it has been seen on other occasions in Norfolk, but, from its great powers of diving, it usually escapes; also, that the boat-shooters there, who are well acquainted with the Golden Eye in all its stages, and call it Rattle-wings, say, they also know the true Morillon, which they consider to be quite distinct from the Golden Eye. We are much inclined to think this opinion correct, and that two species have been often confounded under the title of Golden Eye. In support of this idea, which we have for many years entertained, we quote the following opinions:—First, Mr. Colquhoun, in his "Moor and the Loch," expresses his belief that the Morillon of Bewick is not the young Golden Eye, and he gives as his reason that the Golden Eye is always a good bird for the table, while the Morillon is hard and of indifferent flavour. Now, if the Morillon was the young bird, it would surely be more tender than the adult. Mr. Charles St. John, for whose opinion we have a great respect, states that the Golden Eye in all its states, makes the peculiar noise with its wings when flying; but that this is not heard in the flight of the Morillon. He also says that the Morillon is always found singly or in pairs, while the Golden Eyes often associate together in small flocks. Should these ideas prove correct, we shall probably find that the Buffel-headed Duck, in the immature state, is not so uncommon on our coasts as has been generally supposed.

The third specimen was procured in Orkney, in 1841, by Mr. Mummery, of Margate, and is now in the Margate Museum.

Their flesh is reported to be fishy, and of inferior quality.

Their habits are a good deal like those of the Golden Eye. They are extraordinarily quick in diving, hence their names of Spirit Duck and Conjurer, in America: they fly with great rapidity. In America, they are found in small flocks towards the breeding time, at the end of February, but previously to this they are only found in pairs. This last fact, mentioned by Wilson, may be considered confirmatory of Mr. St. John's opinion, founded partly on a similar habit exhibited by the Morillon in Sutherlandshire.

Their note is a short 'quack.'

Their food consists of shell-fish, shrimps, and the sea-weed called *Ulva lactuca*.

They are said to breed in the northern parts of America, and to nest in the holes of trees, as the Golden Eye does.

Of their eggs we have no record.

In the adult male, the bill is bluish lead-colour; irides, hazel. The head is very large for the size of the bird, and has the plumage elongated and erectile; the colour of the head and upper neck is a fine blackish green, reflecting purple; from the eye a broad band of white passes backwards. Back, rump, and tertials, black; tail coverts and tail, grayish ash; scapulars, wing coverts, and secondaries, white. Lower neck, breast, and belly, white; vent, dusky white. Legs and feet, yellow.

The female has the head, neck, and upper parts, dusky brown; the side of the head has a small oblong spot of white; the secondaries, white; under parts, dull white; vent, ash-colour. Legs and feet, livid blue.

Young males resemble the females.

The adult male measures fourteen inches in length.

The female measures but thirteen inches.

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